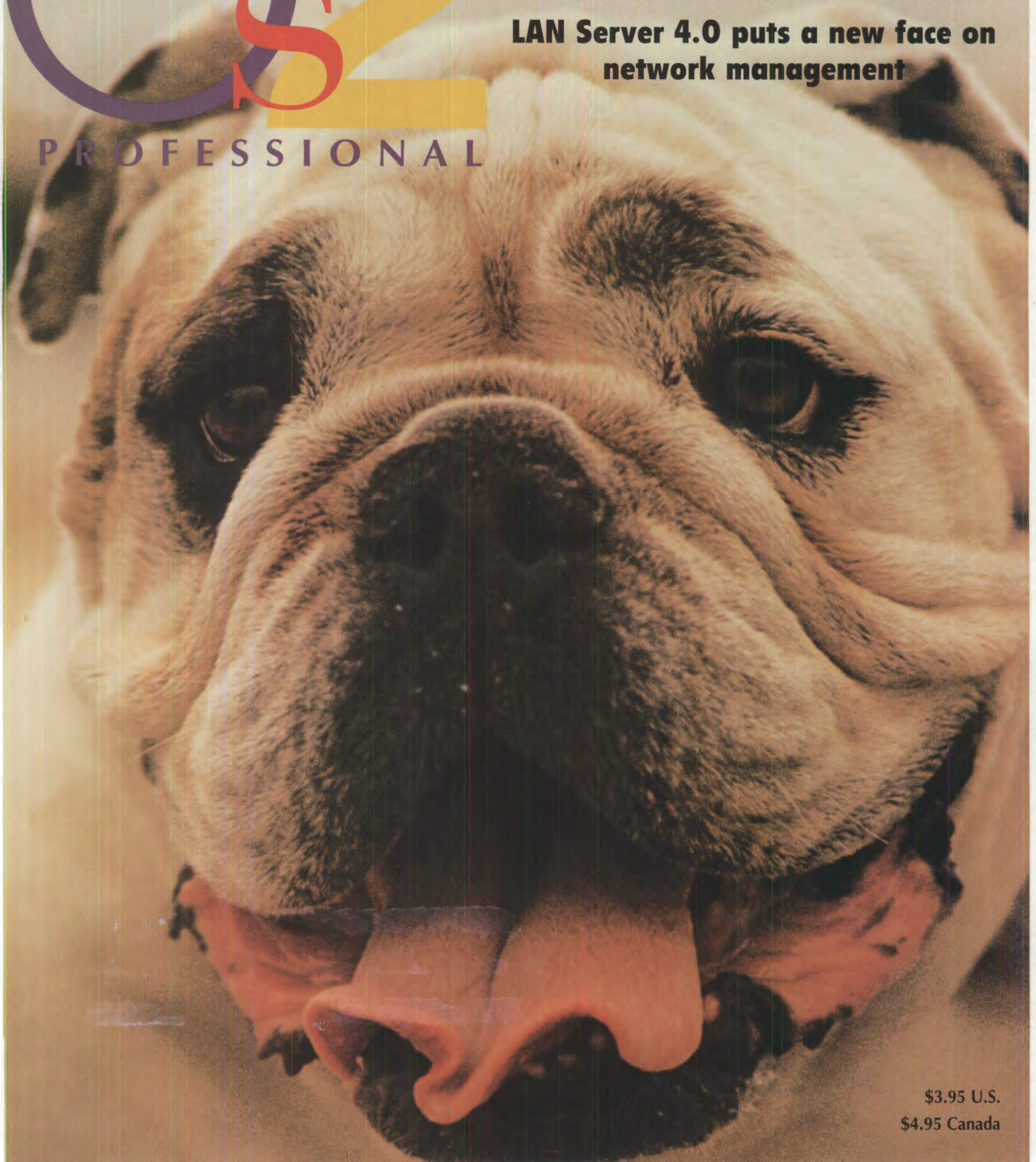


MARCH 1995, VOLUME III, NUMBER 3
OS/2 FOR CORPORATE AMERICA



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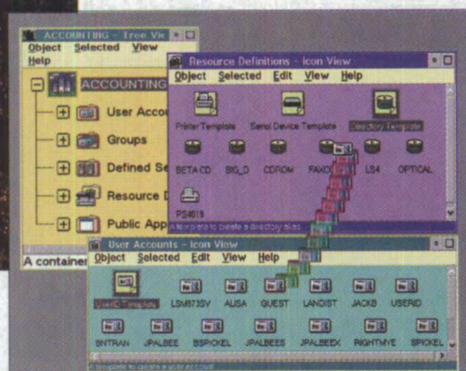


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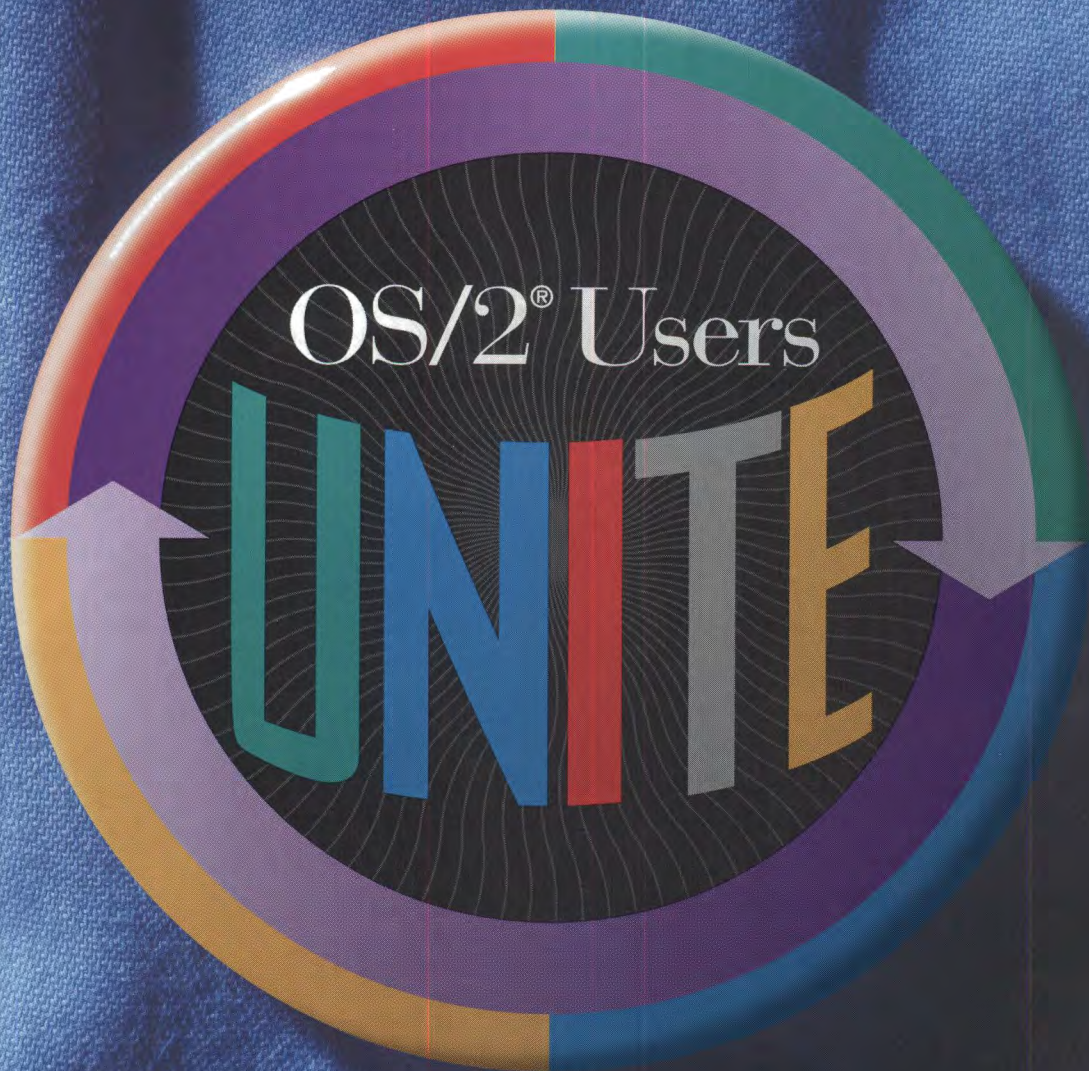
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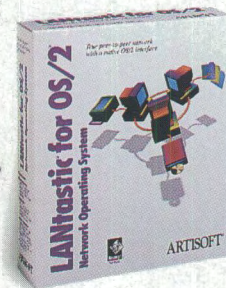
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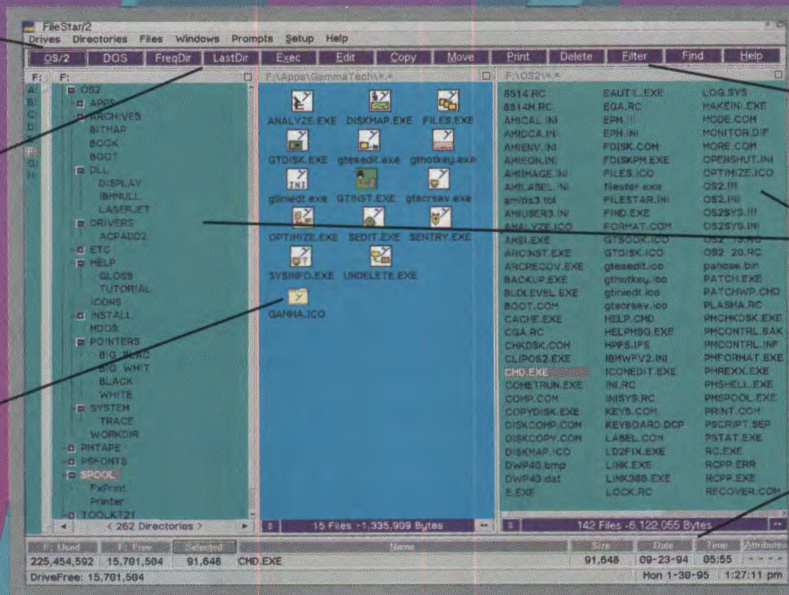
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SPECIAL REPORT

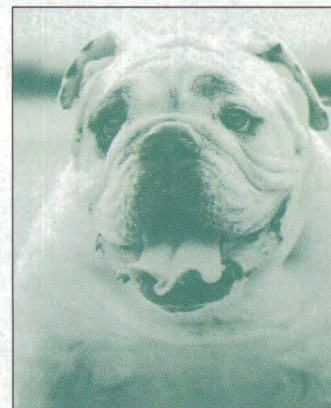
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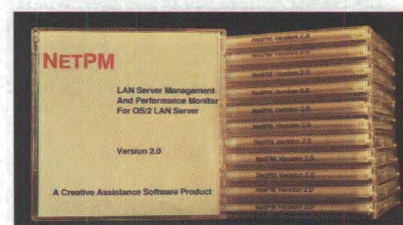
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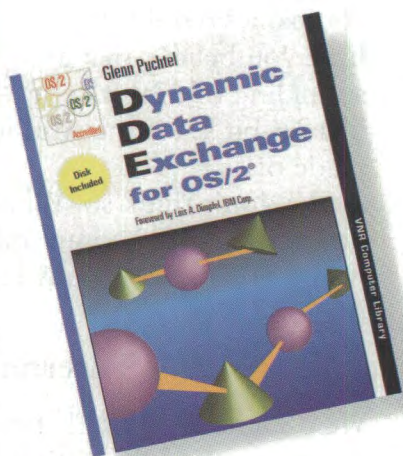
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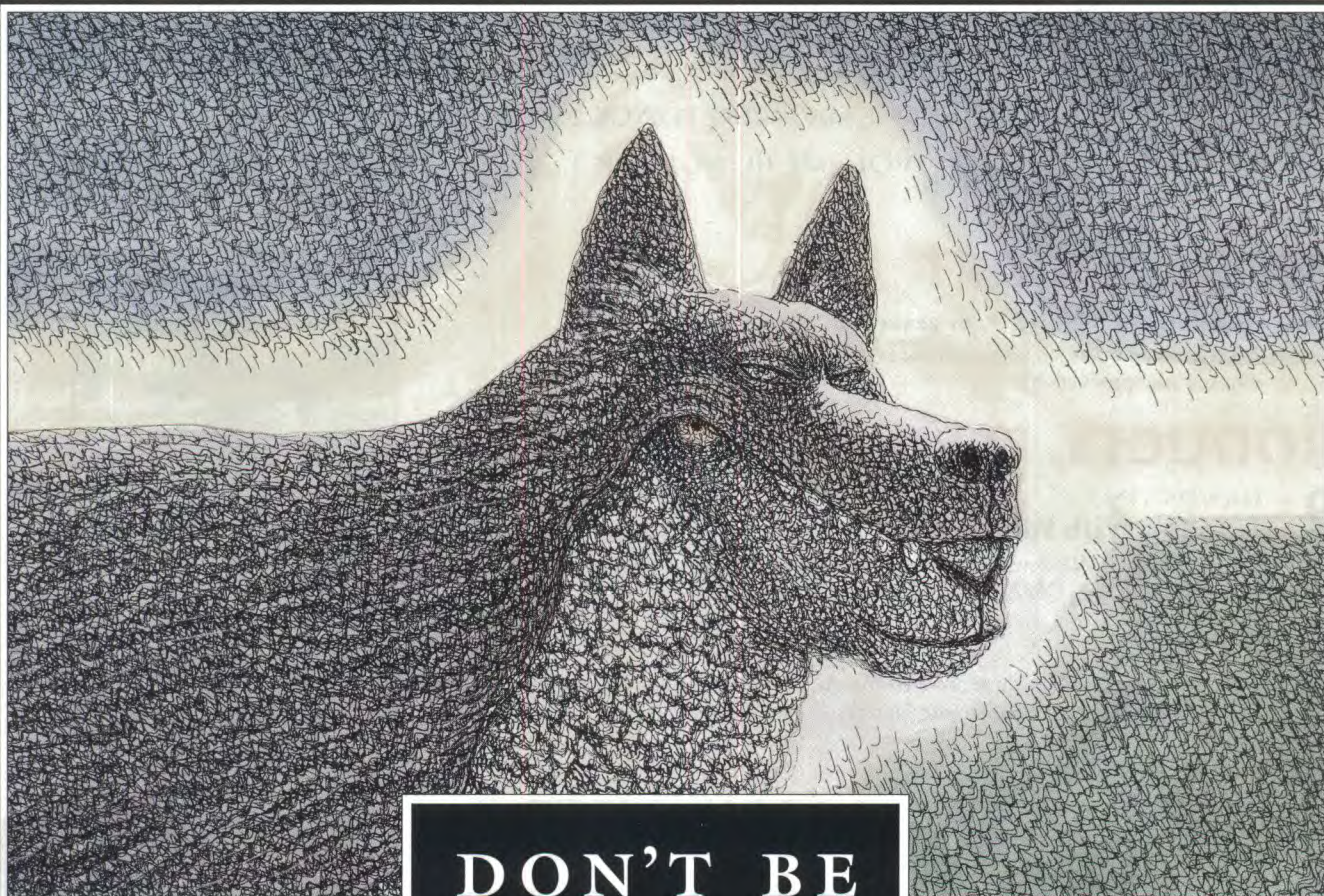


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PAGE 69

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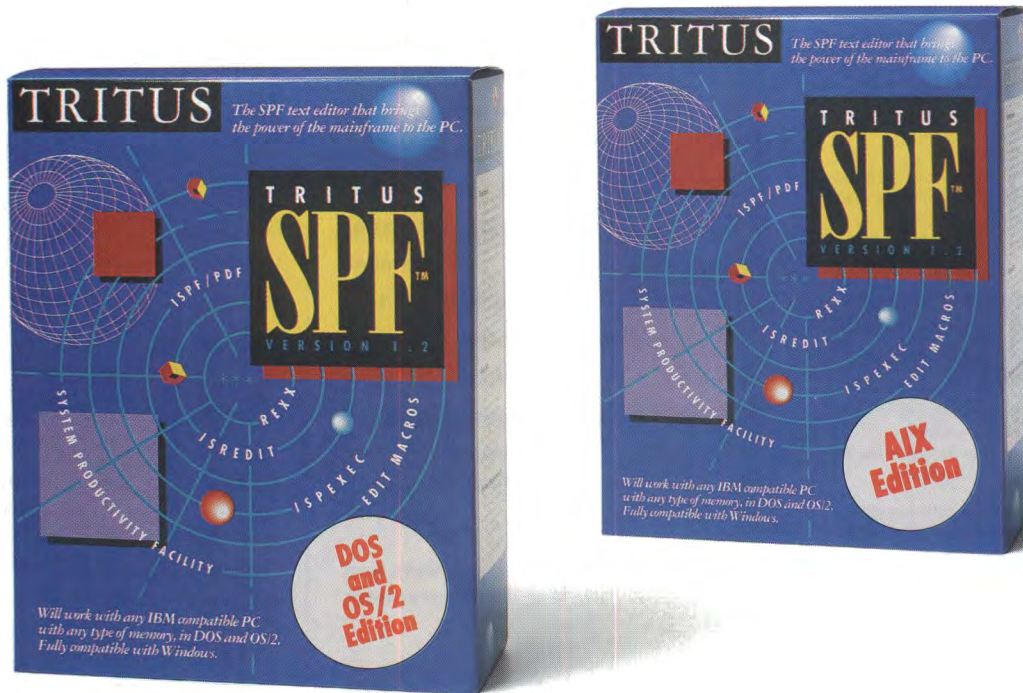
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For more information circle #65



Hello SWS

Most Warp users know the name PSP. Personal Software Products is the IBM division encompassing both OS/2 and LAN Server. What PSP does is important to every corporate user of OS/2 because its mistakes and triumphs ultimately affect the installed base and available applications for OS/2.

But there's another IBM division that is just as important to corporate America's OS/2 path. IBM's Software Solutions division, known as SWS, is currently developing extraordinary OS/2-based networking and databasing tools that will empower corporate users as never before.

Wait, you're saying.

SWS? Those are the people who brought us Bloodhound. Yes, *OS/2 Professional* roundly criticized SWS for fatal ineptitude over Bloodhound. But guess what? SWS has substantially reformed and it has adopted Lou Gerstner's business perspective. It has even admitted its mistakes with Bloodhound. SWS executives and outside consultants now work together to advance the cause of the company and its corporate clientele. Marketing opportunity managers, called MOMs, are cutting across departmental lines to energize everyone to work toward a common product goal. It's not just jingoism. I have seen SWS teams in action. They put PSP to shame for decisiveness and market action. They are the division to watch at IBM.

Sure, SWS has a long way to go before it can compete with the likes of Microsoft. But SWS wants business, not war. So SWS's business practices are configured for success. That's good news for corporate America because SWS products are cross-platform, utilizing OS/2 as a common unifying element.

A perfect example is IBM WorkGroup, which is a conglomeration of more than a dozen powerful SWS products and technologies, from Bloodhound to Time and Place/2 to FlowMark (see the article on page 21). The WorkGroup effort demonstrates how many units within the division can pull together to create a

superior product that will run rings around anything in its class.

Also behind WorkGroup is application development technology, such as found in VisualAge and C Set++, that will make it easier for corporations to create and customize their own OS/2 applications. Sophisticated database technology from SWS is downsizing and becoming more personalized. On top of all that is object technology, establishing the trend for computing through the next century.

OS/2 Professional has covered PSP and OS/2 through all its growing pains, through its triumphs and failures. Now corporate

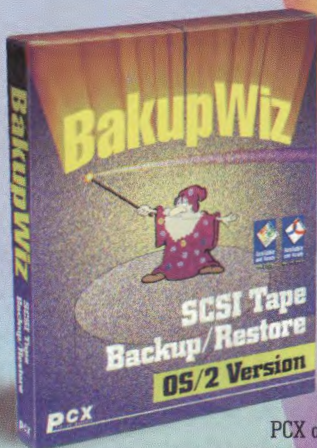
OS/2 and the level of IBM's OS/2 software has advanced to the stage where our role needs to broaden to cover the ups and downs, and the promises and potential of SWS and OS/2-related products such as WorkGroup, DB2/2 and C Set. We will continue to cover Warp and its PSP parent. But we want to spend just as much time covering SWS and its OS/2-exploiting applications. Whoever says that OS/2 doesn't have powerful native applications just doesn't know enough about SWS. That's their fault. And ours.

Also, at press time, federal Judge Stanley Sporkin has rejected the Justice Department's sweetheart anti-trust settlement with Microsoft. Attorney General Janet Reno is already attacking the judge for playing prosecutor. Unfortunately, Reno has overlooked Tunney legislation that prohibits judges from rubber stamping such plea agreements. Moreover, in some jurisdictions a prosecutor's public admonishment of a judge can be grounds for disciplinary action. Reno, a former prosecutor, should know that. Bill Gates is a darling of the Clinton Administration, excuse my golf game. But that is no reason for the Justice Department to try to shackle a judge who is finally showing the gumption that has been lacking for so long.

We'll be saying more on the subject soon. For that, you'll have to wait until April.

Edwin Black

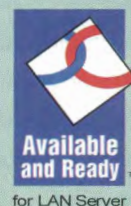




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file systems are supported and Extended Attributes, Long File Names, System files, and the Workplace Shell are backed up. You can even restore your entire OS/2 boot volume from tape! Ease of use is another of OS/2 BackupWiz's strong points. A simple, character oriented menu interface and command line operation are provided. OS/2 BackupWiz comes with support for most 1/4", 4mm (DAT), and 8mm tape devices. BackupWiz can also backup to other hard drives, file servers, minis/mainframes via TCP/IP, and removable drives including Bernoulli, Syquest, diskette, and magneto optical. There is even a version of OS/2 BackupWiz that supports many of the automatic tape changer mechanisms. Any SCSI host adapter that has an ADD driver can be used with OS/2 BackupWiz.

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is included with each PortaTape.

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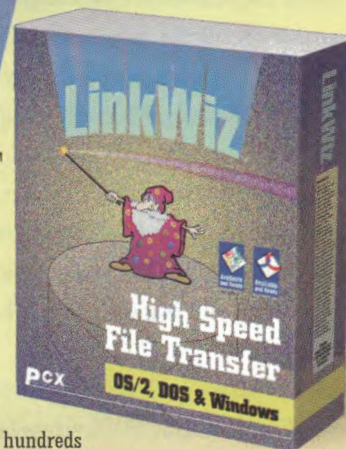
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Comments, criticisms, and observations

App-athetic

Unfortunately, OS/2 is used more as a memory-resident program to give DOS and Windows programs an "octane boost" than as a real operating system that runs actual applications designed for its unique abilities.

This is because people who use OS/2-specific applications are in for a major performance downgrade. At my office, we use Lotus for DOS 3.1. When we tried Lotus for OS/2, we were confronted with a "32-bit upgrade" that was slower, hogged our hard disks, and was not as simple as Lotus for DOS. The same disappointment happened when we tried DeScribe. It lasted about two months before we gravitated back to MS Word for Windows. The two OS/2-specific programs we use—and love—are HyperAccess Lite and Faxworks Pro. Both of these 32-bit applications are clearly superior to their 16-bit counterparts.

OS/2's success is not dependent upon OS/2 itself, but rather upon the superiority of OS/2 applications. These programs have to prove they are clearly and significantly superior (i.e., faster, take up less memory, more powerful, easier to use) than their 16-bit competitors.

Please do all OS/2 users a favor and stop focusing on OS/2 itself and start focusing on actual OS/2 applications. At least 40 percent of your magazine should be devoted to comparing OS/2 applications to their 16-bit competitors. Show us, and Windows users, if one particular 32-bit program is faster, more powerful, requires less memory, and more "user friendly" than its 16-bit competitors. I want to see benchmark comparisons similar to those in *Consumer Reports*. Is Lotus SmartSuite for OS/2 performance better than SmartSuite for Windows or MS Office?

David M. Daban
Bethlehem, PA

Regretfully, I have to agree with the first three letters that appeared in your January 1995 issue [*What Campaign?*, Input]. I love OS/2 for the things it's

supposed to do. I love it when it works. But if I were to try to fax this letter from the Warp Workplace Shell, I would have to shut off the computer, repower it, and open a backup desktop to get back into the OS. I've tried to resolve this for over a month. It's probably simple. But it's nothing obvious, and this is the third version of OS/2 I've installed.

The problem is illustrated by Edwin Black's Publisher's Memo. If I "support the native apps," how can I replace TurboCad, Illustrator, PageMaker, QuattroPro, Photoshop, and my scanner to produce and publish my company's book list? I can't use these programs on the OS/2 desktop, in part, because my drawing tablet isn't supported. Which native apps do you use to write, edit, typeset, illustrate, layout, and burn film to produce *OS/2 Professional*?

As an avid reader of the literature, it appears that the people who produce and promote OS/2 live in a different world than those of us for whom the operating system is more analogous to a four wheel drive truck than a Ferengi, whatever that is. You have millions of fans rooting for your success. So did the Pittsburgh Steelers. If you want to win the playoffs, you will have to satisfy your fans, not your managers.

Michael Ferguson
Pelican, AK

Unfortunately, many 32-bit programs have a tendency to be larger and slower than 16-bit programs because of the larger instruction set. For more details on this topic, look back to the "Unfulfilled Promise of 32-bit Software" in our April 1994 issue. Some months ago we made the editorial focus decision you suggest although without assessing any percentages.—The editors.

Burb Blurp

In his January Publisher's Memo, [*Great Team, Wrong Goal Post*] Edwin Black's view that OS/2 can survive just as Evanston survives as a suburb of Chicago, is rather simplistic. When I look at OS/2, I see a lack of an installed base, a lack of commitment, and a lack of quality.

First, in reference to the suburb analogy: most companies do business in more than one suburb of Chicago. Second, IBM will not have the installed base of Windows. The same goes for our target customers, more Windows than OS/2.

As a small developer of a niche product, I worry that we will spend time developing for a platform that, as Black said, IBM senior execs, "...have given OS/2 six months to prove it can compete with Windows 95." I'm not about to commit dollars to a platform that even some senior execs at IBM are not yet fully committed to. Furthermore, IBM just introduced a product that competes with one of our products and the IBM product is not available on OS/2. It was developed in Windows and is targeted for Fortune 1000 customers! What type of message is IBM sending when their own developers choose Windows over OS/2!

Most companies are not looking to limit their customer base. It would be great to have both Windows and OS/2 releases for our product line. However, we are not as rich as IBM and we live or die by our development decisions.

Richard J. Bolesta
Schaumburg, IL

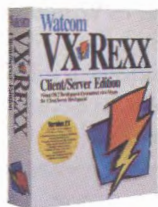
Pro Warp ads

I noticed the two-page Warp ad in the January issue that you produced for around \$1,000. The ad is very effective in drawing attention. Using a sports car as the model is similar to selling cars by showing scantily clad women hovering nearby. Both models really have nothing to do with the product, but they help attract attention. IBM's Warp ads are not quite as effective, if at all.

However, I do find one problem with the ad. The typeface used for the body of the ad is very difficult to read on the dark background. For any other product, I would not have taken the pain to read what the ad had to say. That is the only fault I can find with the ad. And it is one that is easy to correct without

continued on page 31

Fast Visual Application Development for OS/2 and DB2



If you're looking for fast and easy application development for OS/2, then take a look at the award-winning Watcom VX•REXX visual development environment. VX•REXX lets you build applications to exploit the graphical user interface, multi-threading, and multi-processing power of OS/2. VX•REXX Client/Server Edition gives you the added power to access DB2 or other database systems, manipulate the

data, and chart the results at lightning speed.

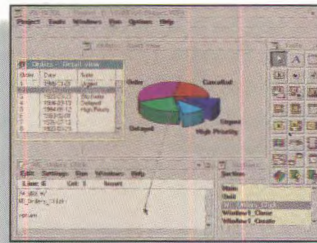
"We like VX•REXX. Using it for development feels like driving a Porsche: it's fast, it's compact, everything's in the right place, and it makes us look good, too."

Peter Coffee, PC WEEK

Designed to Meet Your Needs.

Watcom VX•REXX combines a project management facility, visual designer and an interactive debugger to deliver a highly productive visual development environment. The Client/Server Edition includes additional powerful objects so you can rapidly create rich GUI database applications. You can create OS/2 client applications which connect to DB2/2 or DB2/6000. Use IBM's DRDA support on OS/2 to access DB2 for MVS, DB2/400 for AS/400, and DB2/VSE and VM (SQL/DS) for VM and VSE. Also supported are Watcom SQL and ODBC-enabled databases.

"Overall, this edition of VX•REXX for OS/2 is an outstanding visual client/server development platform." *Nicholas Petreley, InfoWorld*



Point. Click. And Presto!

To create an application you draw user interface objects, customize their properties using standard OS/2 notebooks, and define their event code using powerful drag-and-drop programming. To add database access just draw a query object, visually design a SQL query, press OK and presto— your window is automatically populated with objects that are bound to your query to display, update and search your data.

"Drag-and-drop nirvana." Nicholas Petreley, InfoWorld

Give Your Data a Whole New Image.

Energize your applications by displaying your data in a 3D chart. The Client/Server Edition gives you more than a dozen chart types to choose from, along with over 150 display options. You also get complete support for run-time events so you can bring new drama to your data by making your chart interactive.

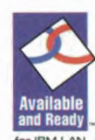
"VX•REXX is a must buy." Jacques Surveyer, ComputerWorld

Standard or Client/Server Edition— Which one is for you?

To start creating powerful OS/2 GUI applications right away, order your copy of Watcom VX•REXX Standard Edition for just...**\$99***

Or, to start creating rich client/server database applications, order Watcom VX•REXX Client/Server Edition for just.....**\$299***

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- Easy to learn event-driven programming model with complete on-line documentation
- Support for professional multi-threaded, multi-windowed and drag-and-drop enabled applications
- Code reusability through section and file sharing
- Graphically create CUA'91 Presentation Manager objects, quickly customize their properties, and easily attach REXX procedures
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For more information circle #100





BYTES & PIECES

News and trivialities, important and obscure



Warp. . .It's Australian for multitasking

The Warp preloading wave is hitting the shores down under as yet another PC manufacturer decides to dump Microsoft. Osborne Computers, Australia's largest computer manufacturer, has agreed to standardize on IBM's software platforms for their entire line of PCs.

Osborne's PCs will now ship with IBM PC-DOS and OS/2 Warp, replacing Microsoft DOS and Windows for Workgroups 3.11. Osborne said that it based its decision to preload Warp on its customers' vocal demands for a 32-bit operating system that ships with an integrated application set.

The decision illustrates acceptance of Warp by the market as well as manufacturers exercising their right to choose an ideal software to use as they no longer need to be locked into a Microsoft standard, said IBM's OEM Manager, Michael Ellenby.

Osborne's decision to preload Warp follows German PC manufacturer Vobis Microcomputer's preload agreement reported in the January issue, and more than doubles OS/2's OEM market share. IBM says that it plans to finalize negotiations with other OEMs over the next few months.

Why wait?

OS/2 Professional readers will remember the David Barnes *Why Wait? Sell OS/2 Warp* video featured in January's Bytes

& Pieces. Nearly 1,600 copies of the video were ordered in one week alone, bringing the total number of videos distributed to 38,000. Since our last report, IBM has released updated ordering information. Those interested can order the video for \$19 from the IBM Media Center in Atlanta. The new number is (800) 426-8322 xFTN.

Warp dealt to dealers

While many are questioning the Warp advertising campaign's ability to inform potential users of what exactly the product is, IBM is going after dealers and resellers to boost their awareness of the operating system. Offerings such as OS/2 Warp Awareness and Technical Training sessions and the *Why Wait? Sell OS/2 Warp* sales-training video produced by IBM are helping resellers and dealers to better answer their customers' questions about Warp.

IBM reports that more than 3,800 reseller locations enrolled more than 11,000 employees in OS/2 Warp training sessions since Warp's release in October.

Developer developments

The "wait and see" attitude that many developers have taken toward OS/2 is coming to a close for both new and former software developers. Corel Corporation and Novell Inc. both recently recommitted their resources to the platform.

Novell, a former developer for OS/2, recently released a set of integration tools available on a single diskette that

allows WordPerfect 6.1 to take advantage of Warp's Workplace Shell. The company had previously developed an OS/2 native version of their WordPerfect 5.2, but told *OS/2 Professional* that "the program wasn't supporting itself financially so we stopped development." When asked about future development plans for OS/2, Novell replied "So many OS/2 users use Windows apps that at present the integration tools are the best thing to offer."

IBM commented that the move "is a good sign that Novell may be giving OS/2 a second look."

Corel Corp. has also made significant changes in its allocation of OS/2 development resources. Corel told *OS/2 Professional* that last November

they were just beginning to express an interest in the platform and that since then, they've brought on board a six-person OS/2 development team that has already seen the release of an OS/2 native CorelDraw. Corel's next development will be the Corel CD Office for OS/2, which will incorporate a word processor, spreadsheet, graphics tools, and a database program.

Corel sources say that the CD Office for OS/2 won't be available until sometime in 1996. The 32-bit product will first be released for Win95 and then developed for OS/2. When asked why they were developing first for an unavailable OS instead of Warp, Corel replied, "The team of OS/2 developers is focusing on CorelDraw 6.0 right now. We've already allocated the resources to developing the CD Office for Win95 and have been assured by Microsoft that everything is proceeding as scheduled." ♦



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FOR OS/2 & DOS.



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Stacker 4.0 is compatible with OS/2, Windows and DOS applications, and new OS/2 Warp. And if you're running DoubleSpace™, DriveSpace™ or SuperStor/DS, Stacker's conversion program is the easiest way to move to OS/2 without uncompressing your drive.

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information. And the new Stacker Toolbox™ gives you instant access to your Stacker tools from your OS/2 desktop—just point and click.

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For more information circle #54

The Lucky Number

BY BRADLEY D. KIEWER

If I were superstitious, I think I would look to 3.1 as the lucky number for PC software. Two examples immediately spring to mind: DOS 3.1 and Windows 3.1. For years, DOS 3.1 set the standard for PC operating systems. The 2.x series was not robust enough for the hardware, and when 4.0 appeared, it used too much memory and introduced too many incompatibilities. Today, many DOS programs still list version 3.1 or higher as the required platform. On the Windows side of the equation, many people felt Microsoft didn't get it right until version 3.1.

Both DOS and Windows began to excel with the 3.0 versions, but there were still a few rough edges until 3.1. Does this sound familiar? OS/2 Warp has certainly garnered interest of late, and most of us have hit a few rough edges whether through installation problems or snags in the new BonusPak applications. Could the next code tweak launch Warp toward universal acceptance? That might be asking a bit much, but honing the product will certainly improve market penetration.

On the other side of the equation, might Win95 become the next DOS 4.0? There were plenty of lessons learned from three years of experience with 32-bit OS/2. We learned that 32-bit processing can mean bigger and slower rather than leaner and faster. We learned that multithreading requires an entirely new software design approach that leads to fits and starts in the development cycle. We learned that backwards compatibility with existing software is the key to gaining market acceptance. Even if Win95 launches with several native applications in tow (remember the promises for NT?), will those products be properly designed, stable, and efficient? Will users find the advantages compelling enough to create a market? You can certainly count me among the skeptics.

In light of these questions, I'm particularly amused by the recent speculation about Win95 support in the next release of Warp. Certainly IBM would be foolish not to be developing Win95 compatibility as an insurance measure. But publicly releasing the technology before native Win95 apps gain market acceptance would be disastrous for native OS/2 development. The compa-

nies with the most to gain from Win95 are the very companies with multithreaded 32-bit experience behind them: Lotus, DeScribe, and to some extent Corel. All three companies have been working out techniques to develop Windows and OS/2 versions in parallel. But why put the resources into unnecessary parallel development if OS/2 will support Win95 right out of the gate? I won't hold my breath waiting for Win95 support from IBM (or waiting for Win95, for that matter).

What I expect to see from the remaining Win95 developers are warmed over versions of Windows 3.1 apps à la the ill-fated WordPerfect for OS/2. Lotus got it right when they designed the OS/2 SmartSuite from the ground up. They paid a price for

that decision in terms of reduced features and excessive memory consumption: a price that may yet reveal a mother lode of 32-bit success if they play their cards right. Will many Windows developers have that stamina? If they do, can they afford to cut off the growing Warp base from running their applications? More significantly, can developers afford to cut off the tens of millions of Windows 3.1 users who will not upgrade their systems in the next year or two?

I fully expect Windows 3.1 to remain the software application standard for the next several years. Ironically, this gives OS/2 Warp a technological edge. IBM has had three years to refine Windows 3.1 support on a multitasked, multithreaded base. OS/2 may prove to be a more compatible Windows than Win95.

On the native application front, those few, committed vendors have had even longer to rearchitect their applications. And don't forget IBM. While IBM's enduser offerings have remained sparse to non-existent, their 32-bit corporate powerhouse applications have had time to mature: LAN Server, CM/2, DB2/2, Visual Age, and Workplace to name just a few. Warp might actually take the lead in true 32-bit, multithreaded applications. The future holds promise for OS/2 Warp if IBM can just grab hold of a little luck. ♦



A color photograph of a middle-aged man with dark, wavy hair, smiling warmly at the camera. He is wearing a dark blue suit jacket, a light blue dress shirt, and a patterned tie. His hands are clasped together in front of him. In the background, a red sports car is visible, slightly out of focus. The overall lighting is soft, and the man's expression is friendly and confident.

MAZDA'S I.S. CHIEF

CAN'T WAIT TO

GET WARPED.



OS/2 is in its third rev, so it's solid, stable, and mature.

Mike Anzis is the I.S.

man behind the wheel of

Mazda's computers. And

OS/2® Warp is about to

make his life easier.

From a basic

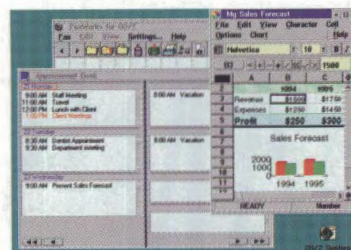
4MB laptop to a

client/server system,

the OS/2 family

now scales an even

wider variety of PC platforms.



The BonusPak gives mobile users the applications they need.

As Mike puts it: "We use OS/2 on our head-

quarters' client/server systems. It's also installed in

our 900 dealerships.

But until now, we

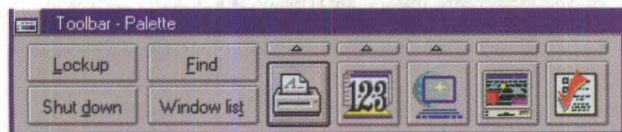
haven't been able to get

OS/2 everywhere we need it - on laptops in the

field. OS/2 Warp changes all that." OS/2 Warp

is the 32-bit, multitasking, Windows™-friendly way

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A toolbar gets users into their applications quickly and easily.

proven reliability, OS/2 Warp is a total computing

solution that performs ruggedly at every level.

And OS/2 Warp is a real communicator.

With fax, Internet

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isn't an easier way to keep those out on the

road in the loop.

OS/2 Warp also offers Mike Anzis rock-solid

reliability. "I know from years of experience with

OS/2, I can trust it to keep performing. Now I can

enjoy this peace of mind at every level."

OS/2 Warp is available for under \$90. To get

warped, stop by your local software dealer, or call

1 800 3 IBM-OS2. Ask for a free demo disk.

The new 32-bit, multitasking, multimedia, Internet-accessed, crash-protected,
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OS/2 Warp is available from your software dealer. It's also available from IBM for \$89 by calling 1 800 3 IBM-OS2.

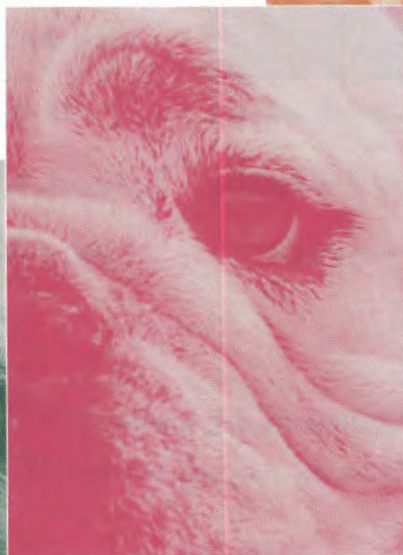
Reseller prices may vary. OS/2 Warp consists of OS/2 version 3 and BonusPak. IBM, Operating System/2 and OS/2 are registered trademarks of the International Business Machines Corporation. Crash Protection and the OS/2 logo are trademarks of IBM. Windows is a trademark of Microsoft Corporation. ©1994 IBM Corp. All rights reserved.

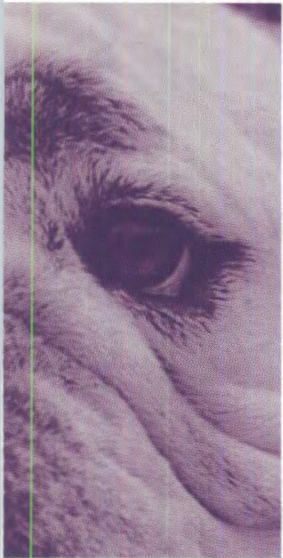
LAN'S BEST FRIEND

BY BRADLEY D. KLIEWER

Who says you can't teach
an old dog new tricks?

LAN Server 4.0's GUI interface adds new vitality and ease of use to a reliable, but tired old standard. If you passed over LAN Server in previous incarnations, it's time to take another look.





IBM's tired old LAN Server character mode interface has learned a few things from OS/2's object oriented interface. Fortunately, the slick new interface on LAN Server 4.0 was built upon a solid foundation: LAN Server 3.0. If you've ever used LAN Server 3.0, you already know it provided competitive features and performance. But configuration could be a nightmare. Setting up a shared printer or directory tree might require several awkward steps through an ugly character mode menu. User profile settings were even more confusing, spanning two separate (and often confusing) programs.

The user interface is not the only change in store if you are migrating from LAN Server 3.0. The Advanced version of LAN Server 4.0 provides a handy new function that permits limits on disk space allocation. This is in addition to the HPFS386 file system, which provides a faster, more tightly integrated disk system (as well as cache sizes that may exceed standard HPFS' 2 MB limit). Both the Entry and Advanced packages feature a number of enhancements including automatic network adapter detection, built-in TCP/IP support, peer services for DOS and Windows requesters, complete on-line documentation, a single sign-on utility (including simultaneous logon to minicomputers, mainframes, and NetWare servers), a Tuning Assistant, and several handy utilities and scripts originally developed by clients or in-house at IBM. However, the GUI improvements and a streamlined installation process rank among the most important additions.

Like Warp, LAN Server 4.0 sports a much simplified installation process. Your first choice upon running the

installation program is between "Easy" or

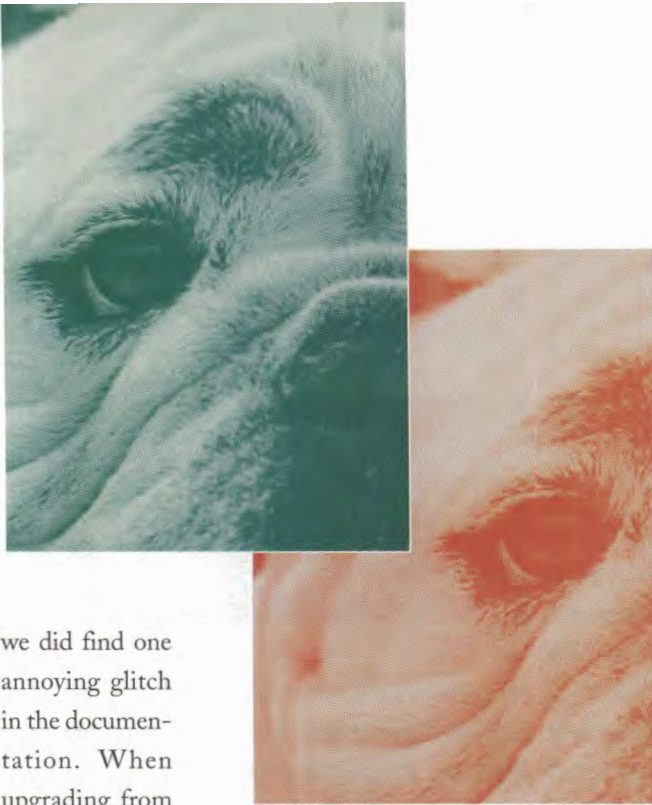
"Tailored" configurations. The latter term, which prompts the installer for every little network detail, is less confusing than its "Advanced" progenitor (many confused the "Advanced" installation path with the selection of features for LAN Server 4.0 Advanced).

Installation

The Easy configuration runs through five simple steps: select the installation drive, name the server, name the domain, specify whether the current server is the first server to be installed on the domain (in the old parlance, whether this is the domain server), and confirm the type of network adapter installed. The installation program provides defaults for the destination and domain name, thus easing any confusion over terminology for LAN Server initiates. Our first Easy install to a Pentium-based EISA bus Zenith Z-Server with a 3Com TokenLink III Ethernet adapter proceeded flawlessly from the initial Warp installation to the final LAN Server configuration. Some installers may hit one hitch, however. As our contributing writer Jerry Pournelle discovered, the easy installation path does not confirm the LAN Adapter settings. If the automatic adapter detection sets the address incorrectly, you will see error messages from the adapter drivers when you reboot the system. Your only recourse is to reinstall the adapter through the more confusing "Tailored" method or directly through MPTS (Multi-Protocol Transport Services).

Experienced LAN installers (or those upgrading from an earlier version) will probably skip the Easy path and head straight for the Tailored option. So long as you're comfortable with the terminology (MPTS, LAPS, DCDB, Domains, etc.) the process runs fairly smoothly. However,





we did find one annoying glitch in the documentation. When upgrading from LAN Server 3.0, the workstation installation advised saving the current configuration files before continuing and referenced the *Network Administrator Volume 1: Planning, Installation, and Configuration*. However, locating the appropriate advice in the on-line documentation led us through such a convoluted path that we were never quite sure what we were supposed to save. As near as we could tell (and this was drawing upon years of experience with LAN Server), the advice was to run the BACKACC program and save a copy of the DCDB (Domain Controller Database) to avert potential disaster should something happen to the ACLs (Access Control Lists) or DCDB during the conversion.

As our test installations became more complex, so did the potential for problems. For example, we discovered a limitation with the 3Com Etherlink III installation when we later added a second adapter to one of our servers. The MPTS (or LAPS as the actual install screens continue to call it) configuration does not prompt for the slot number on an EISA bus system. Without a slot number reference, it was impossible to differentiate between the two identical Ethernet adapters on the system. We were forced to manually add entries to the \BMLAN\PROTOCOL.INI files so that LAN Server could assign the support functions to the proper adapter. Please note that this problem resides in the .NIF (network information file) for the adapter and is not a limitation of MPTS itself. In fact, the Madge Smart Ringnode adapter on another EISA server correctly included an optional slot number prompt.

Our second test system was a Token Ring equipped IBM PC Server 300 with an EISA bus and the aforementioned Madge

Smart EISA Ringnode adapter. The PC Server was configured as an additional server on an existing domain controlled by LAN Server 3.0. Although this installation appeared to proceed smoothly and properly connected to the existing domain, we hit our first error the first time the server disconnected. When attempting to reconnect to the domain, the additional server could not log on. Somehow, the security features got out of sync between the two servers and the domain would not recognize the additional server.

Several attempts to completely abandon the additional server configuration on both the domain controller and the additional server and redefine the settings reestablished the same problem: the additional server could log on only once. Further attempts to disconnect and then reconnect required an awkward sequence of commands to bring the additional server back up. We never managed to fix the problem through the menu-oriented commands. However, when we turned to one of the handy utilities (addsvrin) that combines multiple menu steps into a single command, the system finally began working properly.

Setup

Aside from its character mode interface, perhaps what best characterized LAN Server 3.0's interface was the lack of any cute tricks. Setting up a shared directory (or folder, in LAN parlance) for the first time required a convoluted path of creating an alias, creating an access profile for the alias, and in most cases applying the access path to the alias. Once you knew the routine, the process was fairly simple. But learning and repeatedly going through the same menu paths for every shared device quickly became tiresome. Of course, all of these steps rested on the assumption that you had configured the user profiles and groups appropriately (a completely separate program with a GUI, rather than character mode, interface), and that you had already created the requisite directories on the shared device.

If you prefer, you can continue to follow the old methods on LAN Server 4.0. Those who wish to improve their productivity will learn to use LAN Server Administration's new GUI interface for network configuration. Do you want to share a directory on drive D? Simply right click on the folder in the Drive D icon and select Manage Access... from the menu. Or, if the directory does not exist, open the Resource Definitions folder and tear off a directory template (conveniently located right in the Resource Definitions folder). In either case, LAN Server Administration will lead you through the process—prompting for all of the alias-

IBM WorkGroup—The Enterprise Survival Kit

As corporations and government units find their office automation demands increasing, and their office automation budgets unable to keep up, a smart new OS/2-based survival product is just hitting the market. It's called WorkGroup, and no self-respecting network should be without it. It does just about everything and operates across platforms.

WorkGroup is a new multi-functional product from IBM Software and Solutions (SWS) that includes products from across the IBM software topography. In a word, the company took all its hottest standalone products and product technologies and turned them into "functions" to make one awesome management and organization weapon. Bloodhound, UltiMail network messaging, Person-to-Person, Time and Place, FlowMark, VoiceType, and much more—IBM has plugged them all into WorkGroup.

Using WorkGroup, everyone in the office—or the organization—can access a common address book, join an e-mail network that includes voice and graphic attachments, share a calendar, video conference, and all the other stuff you've dreamed about, and do it with OS/2's ease of use. You don't have to wait until 1996. It's available right about now.

The key to WorkGroup is an object oriented, drag and drop approach that will be transparent to users. They will see tasks, projects, and functions on their screen—not applications. In fact, they will not even start the applications. Nor will they hit a steep learning curve. The LAN administrator sets up the system, and the terminals get happy. Users should not even be aware that the information passing through the system has been processed by several different integrated technologies and function layers. For example, a user will be unaware that the scheduling information calls upon the address book to fax a calendar reminder to eight staffers in three cities for a video conference at 4 PM today and then follows-up to make sure they all attend, and then launches the video conference on time and allows everyone to whiteboard themselves into ecstasy.

WorkGroup sells for under \$500 in its greatest configuration. And it connects to other independent vendor products such as Lotus Notes and Microsoft Office. ♦

IBM WorkGroup at a Glance

Group Communications

- **E-Mail.** The backbone of the IBM WorkGroup mail system is UltiMail, a multimedia electronic mail system for TCP/IP networks which allows users to author, send, and receive multimedia information including text, enriched text, scanned images, video, and audio. UltiMail provides an easy-to-use graphical interface, access to information throughout the enterprise through object oriented, client/server programming capabilities, and transport networking on SNA, NetBIOS and Netware via AnyNet.
- **Scheduling and Calendaring.** Time and Place/2, the well-known client/server, LAN-based calendar and group scheduler works across single or multiple LAN environments.
- **Fax.** FaxRouter routes incoming and outgoing faxes along a network.
- **Directory.** Personal and corporate-wide electronic directories of people and resources. Not based on an existing product, the directory function was designed to be a super-address network accessible book.
- **Agent.** IntelliAgent is a personal office assistant that you program to automatically launch routine tasks such as program functions, responding to or sending mail, or even searching databases to issue reports.

Work Management

- **Workflow.** FlowMark models, documents, and tests the execution of processes. FlowMark uses object technology for faster application development and re-use of application programs.
- **Forms.** FormTalk produces and tracks forms and routing.

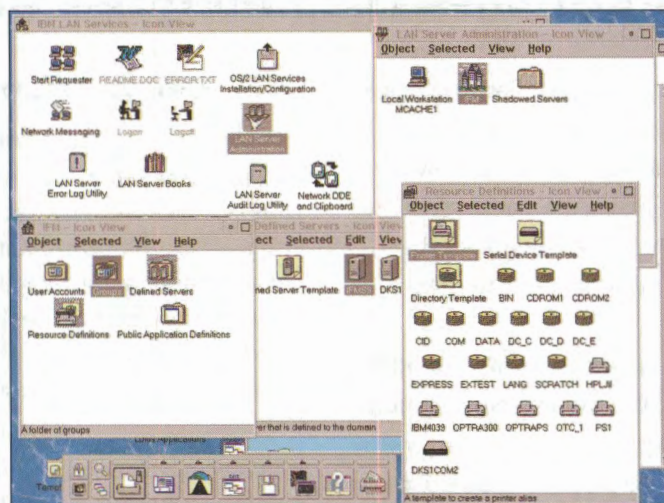
Information Management

- **Bloodhound.** The now famous text-finder from hell has been given a permanent place within WorkGroup. Soon, the product will not be available as a standalone—except maybe from OS/2 Express.
- **Document Management.** Visual Document Library provides enterprise-wide version-control.
- **Image Processing.** ImagePlus VisualInfo document imaging, storage and retrieval, and linking. For example, folders can combine reports, spreadsheets, correspondence, scanned photos, checks, and notes in a single library.
- **Data Analysis.** Object oriented queries and analysis are available through Visualizer, which works with DB/2.
- **Desktop Conferencing.** Person To Person/2, IBM's desktop conferencing product, allows as many as eight people to visually review and annotate documents or images. Works best as a whiteboarding session, but can be configured for person-to-person video.
- **Publishing.** BookManager creates electronic books and references.

— Edwin Black

es, access rights, and inheritance information in one fell swoop. You can create user accounts and groups through the same methods. Better yet, once you are working through maintenance, rather than setup, you may simply drag one object onto another. To add a user to a group, you drag the user's icon onto the group icon. To give user (or group) access to a directory or printer, drag the user (or group) icon to the resource definition icon. Or, drag the resource to the user. The interface is amazingly consistent, complete, and easy to use.

In a multiple server environment, LAN Server Administration accesses not only the 4.0 servers, but any existing 3.0 servers that have not yet been updated. Likewise, you can mix and match 3.0 and 4.0 requesters among your client machines. The extensive and transparent cross-compatibility makes updating the corporate



The LAN Server Administration program simplifies management through an easy to use Workplace Shell interface.

LAN from LAN Server 3.0 to 4.0 much less painful. This flexibility extends to the operating system, too. Our internal network now includes machines running OS/2 2.1, OS/2 Warp 3 (at testing time the Fullpack and LAN Client versions were not yet available), and both clients and servers running LAN Server 3.0 and 4.0 code.

User interface and integration aside, LAN Server's advantages warrant serious

consideration as an adjunct to existing servers in your corporate office. Its performance and stability nearly meet or exceed that of Novell Netware and NT Advanced Server according to tests conducted by LANQuest Labs (commissioned by IBM) and other publications. CID, a feature we covered in the June 1994 issue of *OS/2 Professional*, greatly simplifies OS/2 software installation

LAN Server for Macintosh

Unlike OS/2 workstations, which require an IBM LAN Server requester license on every machine, you can connect unlimited Macintosh systems to a properly equipped LAN Server. This requires a server add-on package called LAN Server for Macintosh (LSM). To your Macintosh systems, which ship de facto with their own file sharing system, the OS/2 server simply looks like a Macintosh server. LSM automatically takes care of the translation of file names, file access rights, and user authorization between Macintosh and PC methodologies. Of course, you must be aware of some basic limitations when accessing files from both PC and Mac (such as 31 character file name limits on the Mac vs 11 [8.3] on PC FAT or 256 on HPFS). The limitations are similar to those you have seen translating between FAT and HPFS systems on OS/2. Additionally there are a few situations which require special utilities (such as using the LSM Administration utility to set encrypted passwords for the Mac), but overall you may maintain and administer files from either PC or Mac.

We tested LSM 1.0, which was obviously behind the times in terms of installation and configuration. Like earlier versions of LAN Server and Communications Manager, the install program simply assumes that the OS/2 LAN Server package resides on drive C. On our OS/2 systems, we use C drives exclusively for the operating sys-

tem and install all software and data to drive D. LSM refused to install until we copied the LAN Server directories to drive C, at which point LSM installed to drive D. That's right, it installed to the correct target drive once an unused copy was sitting on the expected drive.

When started, LSM required disks in all of the drives (floppies and CD-ROM) and required manual intervention for a few prompts. Once running, the Macs could not access the designated partitions. The technical support staff at IBM provided us with updated files that resolved both problems. We would note that, once LSM is running, connecting the Macs to the network is actually easier than connecting the PCs because the Macs have the client software built-in.

Thus far, we've copied Microsoft Word files from the Macintosh to the server and opened them with DeScribe on the PCs. Likewise, we can save files from DeScribe to Word for Macintosh format for transfer from PC to Mac. The HPFS system preserves the file names, as it should, and we no longer resort to the awkward step of copying data to floppies and translating file names to the more limited 8.3 format. Even in its 1.0 incarnation (plus the update diskettes), LAN Server for Macintosh provides a valuable addition to the mixed platform network.

and has been expanded to support DOS and Windows. Most importantly, the growing installed base of OS/2 computers provide substantial leverage in driver and utility development and user expertise.

When a third-party manufacturer such as Madge develops a network adapter driver for OS/2, it also creates a driver for IBM LAN Server. When a utility developer writes a program for OS/2, such as Pro-Engineering's EZ-RAID disk array software, LAN Server benefits, too. A user who learns the Workplace Shell drag and drop interface is on a path to learning concepts that apply to LAN Server management functions. When competing LAN operating systems reach a mature level—as in the current market—the most significant performance and productivity gains will come through hardware and utilities. LAN Server's reliance on OS/2 gives it a clear advantage in this arena. The question that remains is whether IBM can carry this message where it counts: customer sites.

Getting the Word Out

The marketing and development team for LAN Server provides a model that others in IBM would do well to follow. Despite what would seem overwhelming odds (within the last year estimates for industry leader Novell's share have varied anywhere from 65 to 75 percent of the overall LAN market), the LAN Server team has focused on delivering a sound, competitive product. While the public relations and marketing teams for OS/2 itself remained in disarray—a situation that has recently taken a turn for the better—LAN Server PR has excelled. They have returned calls, provided support and demonstrations, and shown initiative in promoting LAN Server. The team portrays satisfied customers and a growing installed base. A recent press release notes the 13,000 licenses shipped in LS 4.0's first 90 days, as the benchmarks of success. Empowering the customer becomes the key to empowering the world—not raw market share or performance.

The team metaphor extends beyond the development and marketing efforts to interaction on the corporate net. Gone are the days when IBM defended its slice of the turf against all others. TCP/IP and Novell Requester support options install right alongside the older IBM NETBIOS and IEEE 802.2. IBM emphasizes the integration between LAN Server and protocols which derive from the same family such as Windows for Workgroups and Windows NT. Like the sled dog or draft horse teams of old, the environment, load, reliability, and personality set the parameters for selecting the right animal. As you step into a new world of GUI LAN management, LAN Server 4.0 may very well serve you as LAN's best friend. ♦

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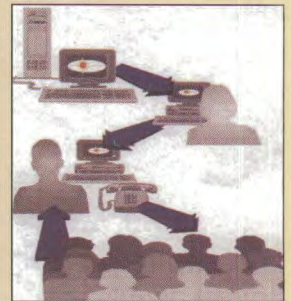
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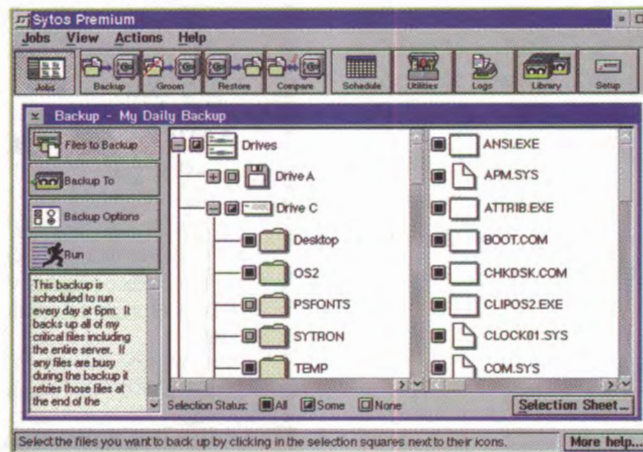
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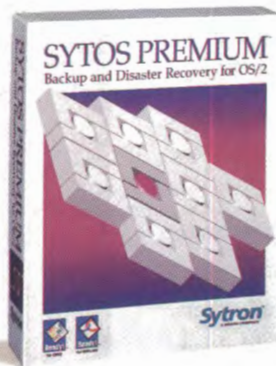


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KOGAN'S KORNER

Tainted Windows

BY MICHAEL S. KOGAN

As Microsoft prepares Windows 95 (Win95) for an August or later debut and IBM continues pushing OS/2 beyond Warp speed, a fierce competition is shaping up for late 1995 and early 1996.

Until recently, detailed sources of information on Win95 for those not under non-disclosure agreements with Microsoft have been limited to *Microsoft Systems Journal* articles, Adrian King's *Inside Windows 95*, Microsoft reviewer guides, white papers, press releases, and details leaked by members of the alpha program and reported by the press over the last year.

In Andrew Schulman's recently published *Unauthorized Windows 95* (ISBN 1-56884-305-4 IDG), we have testimony from one of the leading independent voices in the Windows community on the truth about Win95. As in his excellent "undocumented" series of books, Schulman uses a variety of test programs and debugging tools to provide a detailed illustration of how Win95 is put together without pulling any punches, hiding behind cushy architectural diagrams, or preaching philosophical rhetoric about Win95's mission and charter.

In the process, Schulman also refutes many of Microsoft's claims about Win95's architecture, and confirms what many OS/2 proponents have been saying all along—it's the same DOS-extended Windows enhanced mode with the same multitasking and memory protection problems, albeit with an improved Win32s API and a new user interface. *Unauthorized's* revelations also explain why Microsoft no longer makes claims that "users don't need multitasking on the desktop, the Workplace Shell is confusing, or that OS/2 is not a completely 32-bit operating system."

However, as Schulman states up front, *Unauthorized* is not written in the spirit of criticizing Win95 or Microsoft, but to provide developers with accurate information to facilitate informed decision making when developing their products. While Schulman acknowledges that Win95 lacks some of the features of OS/2 and Windows NT, he concludes that these architectural compro-

mises will not impact Win95's success, and even are part of why it will be successful.

Unauthorized is a must read for all parties interested in the eternal OS war. Not "...to pounce on any architectural compromises ... and deride Windows because it is a 'thing on a thing' not built from the ground up...", but because the ramifications of these compromises make a difference to users and cause Win95 to fall short of its promises. It also provides IBM and OS/2 Warp developers the keys to dealing with the technical issues that Win95 will create when it arrives.

Win95 is not a new operating system when compared with Windows 3.1 or Windows Workgroups for 3.11. Like its predecessors, it still relies heavily on DOS and by no means obviates DOS. In fact, DOS is still alive and well inside Win95, but it has been repackaged and the boot sequence slightly altered.

Schulman divides Win95 into two layers—the Virtual Machine Manager (VMM) and the Windows environment. Like Windows 3.1 enhanced mode or WfWG 3.11, the VMM is a DOS multitasker that supports multiple virtual machines that can run DOS and DOS-extended programs. Due to its extendibility through virtual device drivers (VxDs), Schulman attempts to make a case for VMM as a "real operating system" and actually encourages development of VxDs.

This is somewhat strange because while he does recognize that VxDs are the TSRs of the 1990s, he fails to mention that VxDs have the same problems TSRs have sharing resources and coexisting with each other. Furthermore, Win95 only supports well-behaved VxDs and even Microsoft has admitted that x86-specific VxDs are a dead-end programming path. So it is surprising to see Schulman actually promote VxD development and even revel in their utility.

Like today's Windows 3.X products, the first virtual machine in Win95 is designated the "system VM" and runs a DOS-extended environment—Windows and its applications. Schulman makes it



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KOGAN'S KORNER

very clear that what makes Windows *Windows* is the DOS-extended API provided by the DLLs and the Windows programs that use them, not the underlying DOS-multitasker and VxDs which he calls "the real operating system part of Windows."

As in previous versions of Windows, slightly modified versions of the 16-bit DLLs that provide the Win16 API (USER, GDI, and KERNEL386) are still present. Their 32-bit counterparts that implement the Win32c API (USER32, GDI32, and KERNEL32) are almost entirely mapped onto the 16-bit DLLs, contrary to Microsoft's claims. Not only does Schulman demonstrate this, but he also shows how even a system with only 32-bit Windows programs still uses primarily 16-bit Windows and DOS system code under the covers.

By the end of *Unauthorized* you too will be convinced that Win95 is only an incremental improvement on today's Windows 3.X technology. It is essentially WfWG 3.11 with 32-bit disk and file access enabled, an enhanced Win32s API (Win32c), and a new 32-bit shell that provides an object-oriented look and feel.

Avoiding the Fullpack Dilemma

When Win95 finally ships, OS/2 Warp will have two basic problems other than not being able to run Win95-specific applications—being able to coexist on the same system as Win95 and the ability to package a "For Windows" version of OS/2 that installs over Win95.

Unauthorized's revelations about the boot sequence of Win95 and the repackaging of DOS lead to the conclusion that IBM should be able to quickly deliver support that allows OS/2 Warp to coexist peacefully with Win95 in a dual-boot or multi-boot environment.

Furthermore, since Win95 still uses a slightly modified version of today's 16-bit Windows infrastructure for its compatibility, IBM should also be able to deliver a version of OS/2 Warp (without WIN-OS/2 included) that uses the existing 16-bit Windows infrastructure in Win95 for continued 16-bit Windows compatibility under OS/2. Perhaps in this area Microsoft's compromises will work to OS/2's advantage.

Without this level of Win95 support in OS/2 Warp, side-by-side comparisons and dual environments will be difficult at best, and IBM would be in danger of falling back into a Fullpack-only packaging strategy. With Win95 still six months from shipping, IBM is ahead of the Windows support curve and has the opportunity to provide the support when it is needed instead of a year later.

Knowledge Is Power

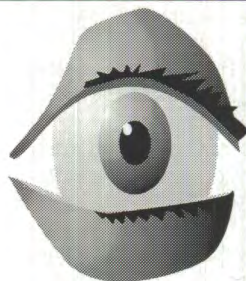
Because Win95 is actually an incremental improvement over today's Windows 3.X, the operating system landscape will prob-

KOGAN'S KORNER

ably not be significantly different when it ships (probably as Windows 4.0) later this year. Win95 will still have the same shortcomings in multitasking and memory protection as today's Windows 3.X, leaving OS/2 Warp and Windows NT as the best choices in environments that require reliable clients to chew gum and walk without tripping.

OS/2 Warp will offer stronger competition to Windows in the small office and home markets due to the current wave of OEM and IHV activity. Due to customer demands, OEMs and IHVs that wouldn't give IBM the time of day are now actively engaged creating Warp system and device support.

This leaves IBM poised to deliver a thunder-stealer of an update to OS/2 Warp in the timeframe right after Win95 ships. Rapidly providing an OS/2 Warp that provides support (not compatibility) for Win95, integrated OpenDoc, more enhancements to the Workplace Shell, and Plug 'n Play can keep Microsoft on the defensive technically, and carry OS/2 into 1996 with a roar. ♦



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HANDS ON

Fiddling with Your Fonts

Fontographer for Windows solves the OS/2 problem of cross-application font compatibility.

BY GEOFFREY HOLLANDER

The Altsys Corporation (now part of Macromedia, Inc.), developer of Fontographer, describes its unusual product this way: "Fontographer for Windows is a specialized graphics editor designed to simplify the creation of high quality ATM (Adobe Type Manager) compatible PostScript Type 1 fonts, [Windows] TrueType fonts, Windows Bitmaps and EPS files."

Fontographer is a great Windows program, especially if you design type—or use OS/2. The key to its OS/2 utility lies in its font conversion abilities because of a common problem shared by most OS/2 users. These users have collected numerous fonts over the years that can only be used with WIN-OS/2 sessions because the fonts follow the TrueType standard, which is unsupported by OS/2. As more native OS/2 applications arrive, the need for a diverse typeface library becomes even more important. Cross-application font compatibility also becomes an issue when using applications from both OS/2 and Windows to produce paperwork for the same project.

Facing these very issues myself, I set out to create an interchangeable sizable stable of fonts usable by either Windows or OS/2 applications. Font files can quickly consume valuable disk storage space, so managing the disk's real estate becomes yet another issue. On my system, I wanted to minimize space occupied by font files by eliminating unnecessary redundancy. I found Fontographer to be the solution.

Most fonts currently on the market appear in one of three formats. The first, and oldest, is the Adobe Postscript Type 1 font. The files that characterize this format are: `fontname.afm`, `fontname.pfm`, and `fontname.pfb`. The second format evolved along with Adobe Type Manager (ATM) for Windows. The ATM format contains its font information in only two files, `fontname.pfm` and `fontname.pfb`. These files are cross-compatible with Type 1 fonts—ATM does not require the `.afm` file. The third type, familiar to Windows users, is the TrueType font format, comprised of a single file, `fontname.ttf`, which contains all the information needed to create, size, and scale the typeface.

The OS/2 font manager uses Adobe Type 1 Postscript fonts for OS/2 applications but it is increasingly difficult to find diverse selections in the Type 1 format. Because Windows is TrueType font-based and some TrueType fonts ship with Windows, several typeface providers have moved exclusively to the TrueType format (e.g., Swift, Bitstream, Microsoft, and SoftKey) while others only offer ATM formats (e.g., Adobe and Micrografx). A few auxiliary font offerings in packages such as CorelDraw provide typeface selections in both TrueType and Adobe Postscript Type 1 formats.

Incidentally, vendors package fonts in families, usually consisting of four different styles: regular or normal, italic, bold and bold italic. Display fonts, mostly used in larger sizes for headlines, headings, bullets, display ads, etc. may provide only one family, or possibly two if an italic form is available. Given that Type 1 fonts require three files for each member of a family, ATM fonts, two, and TrueType fonts only one, a particular typeface, such as Souvenir, may require up to 12 files to provide a full range of type styles.

With all this in mind, I set out to streamline my font collection while making them fully accessible to all of my graphic applications. First, I loaded any TrueType fonts I wanted through the Windows TrueType Font Manager. Then, I loaded any ATM fonts I didn't already have activated in TrueType format with the Adobe Type Manager. Next I opened each font, in turn, using Fontographer. As each font loaded, I turned around and saved it to a temporary directory. These font files were saved in native Fontographer fontname.fog format. After closing this file, I reopened it.

Once reopened, Fontographer's Generate Fonts utility could then be run on the `.fog` font file. By setting the dialog box default to Type 1 fonts, I simply created a full set of Type 1 files for each font or member of a font family. Converted fonts in hand, I deleted all of the `.fog` files from the temporary directory. I also deleted all of the `.cfg` and `.inf` files that Fontographer generates for optional use with Adobe Font Foundry and Ventura/GEM. What remains are the three essential Type 1 files, which can now be loaded into OS/2.

HANDS ON

Both the ATM and the OS/2 Font Manager store their font files in the default directory \psfonts. It's here the similarity between OS/2 and ATM stops, however. When OS/2 installs fonts, it converts the .afm font file into an .ofm font file and copies the respective .pfb file (unchanged) along with it into the \psfonts directory. As far as OS/2 is concerned, it's now a done deal.

The next step is to repeat the same process by loading the same font files from your temporary directory with ATM in a WIN-OS/2 session. ATM will overwrite the existing .pfb files in the psfonts directory but will also copy the corresponding .pfm file into the ATM default subdirectory \psfonts\pfm. This ensures that the same typefaces are available to OS/2, WIN-OS/2, and Windows applications alike. The larger .pfb files are only stored in one place, where they can be accessed either by OS/2's .ofm files or ATM's .pfm files. All that remains is to remove the TrueType fonts and files, stored in the \windows\system subdirectory by using the Fonts utility found in the Windows Control Panel. Finally, you might want to copy the Type 1 font files onto diskette(s), for subsequent font reloading before removing them from their temporary directory.

In the end, you will have a reasonably compact and efficient source for cross-platform fonts. Fontographer is essential for anyone interested in typography—professional or amateur. But whether you become a fontaholic, as I did, or just want the freedom to use any typeface with OS/2 that catches your eye, this program is a must. ♦

Geoffrey Hollander is the principal of Mail Pouch, a computer service bureau in Lake Oswego, Oregon, that serves the direct mail marketing industry.

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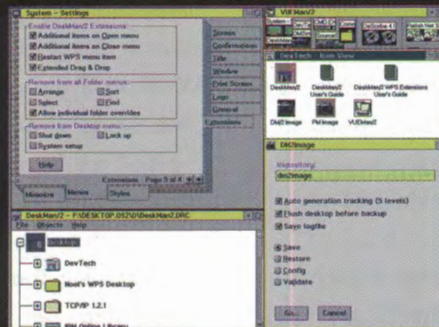
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INPUT

continued from page 11

spending megabucks. I wonder how much such a revision would cost in one of IBM's ads.

David Perez
Lilburn, GA

You're right about the font—a mistake we noticed immediately upon seeing the ad but too late to correct on a tight deadline. We'll fix it if we run the ad again. As for the cost—it will take 5 minutes of a designer's time and about \$100 for new negatives.
—Elizabeth Black

There has been much press coverage indicating that IBM was going to make a major marketing effort in promoting OS/2 Warp. I consider myself to be an average television viewer and can honestly say that I have seen very few commercials either on Canadian or American stations. I recently saw the *Nuns* commercial and was not overly impressed. Likewise, I am not

impressed by the *Get Warped* print ads and find that they hold no enticement to rush out and buy the product.

I saw an OS/2 commercial the other night that caught my attention. It went like this:

The commercial opens in the passenger area of what appears to be a jet plane. The passengers look tired and worn out, like they had been on the plane for an eternity. The camera moves up the aisle toward the cockpit as the co-pilot makes an announcement over the intercom: "Ladies and gentlemen, this is the co-pilot. We are sorry for the inconvenience and problems with the delayed arrival into Chicago. The captain is in the process of upgrading our systems and we should be there soon." The door to the cockpit swings open and the camera moves toward the back of the captain as he says, "Okay, let's see what this baby can do now." The camera swings around to focus on the captain's face to reveal that it is Patrick Stewart (Captain Jean

Luc Picard of the *Next Generation*).

"Maximum warp speed. Engage." The camera position changes to a location outside the ship as it warps away. As the light trail from the ship clears the screen, another light trail appears and moves toward the center of the screen. When it gets close, it turns out to be a package of OS/2 Warp. A caption and voice-over reads, "Enter the next generation. Get warped with OS/2 from IBM."

That was when I woke up. On the television was another one of the many Microsoft commercials I've seen lately. For every one OS/2 commercial I've seen on television, I have seen nine or ten Microsoft commercials. Isn't that about the same ratio of OS/2 to Windows users?

Is anyone from IBM out there? Get the idea? A commercial like this would capture people's attention.

Donald R. Tobivsky
Branford, Ontario, Canada ♦

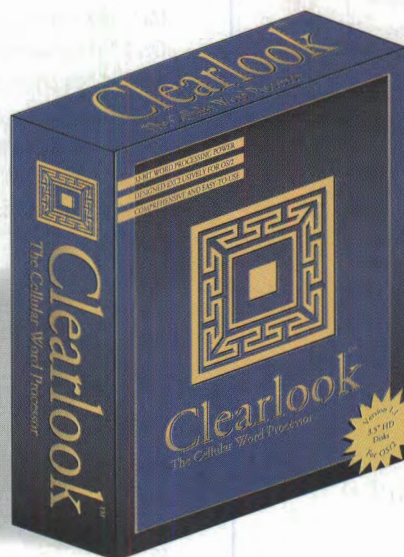
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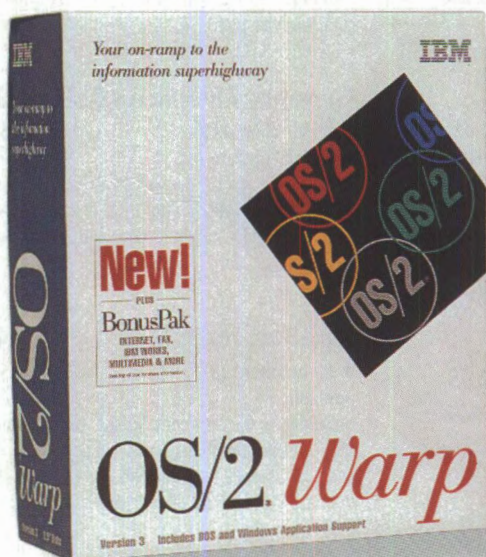
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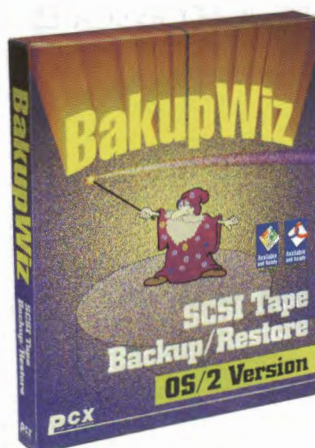
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BackupWiz **\$95.00**
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OS/2

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**OS/2 WARP with WIN-OS/2,
LAN version* \$149.00**
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OS/2 WARP Version 3* \$78.95
Order number 251, A or B **MSR: \$129.00**

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WinGrate \$10.00
Warp add-on \$5.00
Order Number 309 **MSR: \$20.00**

DK Micro
Already bought Warp, but want Full-Pack functionality? WinGrate migrates your WIN-OS/2 environment to a format compatible with Microsoft Windows and prepares your system for Warp installation. All you need to upgrade OS/2 2.1 (Borg) are copies of OS/2 Warp version 3, Microsoft Windows 3.1 or 3.11, and WinGrate.

BACKUP

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Addresses your needs for asset protection and data availability in a distributed environment. It provides operational flexibility by allowing users to define their need for backup and archiving. It also provides productivity gains by automating a formerly labor-intensive process.

BACKUP

**ADSTAR Ten additional
back-up clients \$499.95**
Order number 355 **MSR: \$595.00**

Back Again/2-Pro \$95.00
Order number: 236 **MSR: \$149.00**

Computer Data Strategies
Back Again/2-Pro is a graphical 32-bit backup program for OS/2. It supports backup to LANs, SCSI tape, and other removable media. Includes compression, backup scheduling, and command line utilities for complete disaster recovery.

Back in a Flash! sale price: \$9.00

Order number: 290 **MSR: \$49.00**
CCT

Schedules incremental or comprehensive backup to diskette, Bernoulli, LAN drives or Optical. Support unavailable.

BackupWiz \$95.00

Order number: 171 **MSR: \$149.00**
PCX

BackupWiz is the OS/2 solution for backup to SCSI tape, Bernoulli, syquest, magneto optical, and tape auto-changers. Full support for EAs, long names, and networking is included. Your OS/2 system partition can be completely restored.

Cheyenne ARCSolo for OS/2 \$225.00

Order number: 240 **MSR: \$295.00**

Cheyenne Software, Inc.
ARCSolo is the first substantial native OS/2 backup solution. Designed with a WPS-like front end, it offers drag-and-drop functionality, multithreading, and an object oriented approach.

NovaBack for OS/2 \$49.99

Order number 138 **MSR: \$149.00**

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UTILITIES

ATS for OS/2 **\$315.00**

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MHR

Advanced Task Scheduler for OS/2 is a production job scheduling utility that eliminates the need for human intervention during routine batch processing. ATS allows you to take complete control over how and when each of your scheduled programs will run.

"Bloodhound" March Sale Price **\$199.00**

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IBM

"Bloodhound" (aka SearchManager/2) is probably the most powerful text finding tool you can buy for a PC. Once you've indexed your files, this native 32 bit OS/2 utility and its Thesaurus will find and retrieve with lightning speed files in five languages containing the words you're looking for and linguistic variations and synonyms.

LAN version add-on **\$199.00**

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Runs on LAN Server, Novell or IBM TCP/IP.

UTILITIES

Chron **\$89.00**

Order number 184 MSR: \$99.00

Hilbert

Chron is an OS/2 PM application that will schedule other OS/2, DOS, or Windows applications to run at a specified time and a specified frequency.

CPU Monitor Plus **\$79.95**

Order number 108 MSR: \$129.95

Bon Ami SoftWare Corp.

A premium performance and analysis package for OS/2. CPU Monitor Plus permits real time monitoring and control of CPU, RAM, disks and ports, and program and thread control for all OS/2, DOS, and Windows programs.



CursorPower **sale price: \$7.00**

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North Shore Systems

Redesign and resize arrow, wait, I-beam, and other cursors. Create new cursors or turn graphics, text, signatures, and company logos into cursors. Toolkit includes OS/2 and Windows versions on one disk.

DeScribe - Lights **\$25.00**

Order number 217 MSR: \$29.00

DeScribe Inc.

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DeskMan/2 v 1.5 **\$49.95**

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Development Technologies

The essential Workplace Shell utilities. Dramatically improves the ability of corporations and users to get the most out of OS/2. Manage, secure, backup, and migrate the WPS; get organized with virtual desktops; more.

UTILITIES

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SoftTouch Systems, Inc.

Encrypt your most precious corporate asset—your company data! Using the latest data encryption techniques available*, GammaTech File Secure protects sensitive data from unauthorized viewing. Files are encrypted using unique file keys that cannot be replicated. Data can be obliterated using techniques that conform to U.S. Department of Defense 5220.22-M specifications. (*This product's use of Data Encryption Standard algorithms means its sale, resale, or use outside the U.S. and Canada is expressly prohibited).

GammaTech Power Pack for OS/2 **\$59.95**

Order number 110 MSR: \$69.95

SoftTouch Systems, Inc.

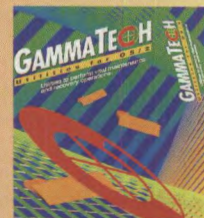
Power Pack is a PM-based application which launches applications and executes lengthy keystroke operations with a couple of function keys. It also includes a sophisticated editor to create, delete, or modify OS/2 INI files and the Extended Attributes associated with your data files. Supports both ASCII and hex. Enhanced screen saver with "hot" corners included with this offer.

GammaTech Utilities for OS/2 Version 3.0 **sale price: \$99.00**

Order number 109 MSR: \$149.00

SoftTouch Systems, Inc.

Performs FAT and HPFS optimization, file undelete, and desktop backup. PM and command line utilities perform disk analysis, recover corrupted files, back up/repair boot sectors, and included a sector editor. Drives greater than 2 GB supported.



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ISSC

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J&J Utilities for OS/2 **sale price: \$39.95**

Order number 112 MSR: \$49.95

J&J Computer Consulting

J&J Utilities v 1.5 is a collection of over 20 utilities including file locate, HPFS and FAT file defragmenters, process control automatic job scheduling, and more.

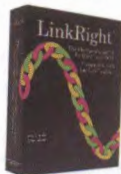
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UTILITIES

LinkRight 1.1 (w/cables): \$99.00

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Rightware Inc.



This parallel/serial port file transfer utility package for OS/2 includes three versions: Presentation Manager, OS/2 command line, and DOS. Copy files to/from OS/2 and to/from DOS systems retaining EAs and long file names. Compatible with LapLink cables.

LinkRight 1.1 (w/o cables): \$65.00

Order number 114 MSR (without cables): \$110.00

OS/2 RM Lite \$67.00

Order number 335 MSR: \$99.00
C.O.L. Systems Inc.

OSrm2 Lite is the OS/2 analysts professional tool for monitoring performance and reporting on CPU, IRQ, Memory, Logical Disks, Physical Disks, Paging, Swapping, FAT/HPFS/HPFS386 caches, Applications, Threads, Files, IBM Lan Server and Lan Requester. Uses OS/2 REXX for reporting. Certified OS/2 and OS/2 LAN Ready.



OS2Tree Lite \$27.95

Order number 141
Levine
OS2TREE Lite is what XTREE Gold is to DOS, what Norton Commander missed, and more. Dynamic graphic file management for OS/2 supporting both FAT and HPFS.

OS2Tree Pro \$89.00

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Levine
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PartitionMagic \$94.95

Order number 356 MSR: \$129.95
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PartitionMagic makes partitioning easy! Shrink, expand, and move, any DOS or OS/2 disk partition without running FDISK or FORMAT. PartitionMagic also converts FAT partitions to HPFS while keeping all data intact.

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Performance Plus for 2.1 sale price: \$15.00

Order number 115 MSR: \$39.95
Clear & Simple, Inc.
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Performance Plus for Warp \$27.00

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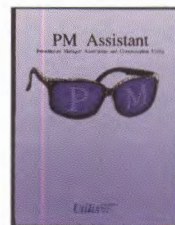
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UTILITIES

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Stac Storage & Communications
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System Sounds for OS/2 \$46.00

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BOCASoft
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Secure Workplace for OS/2 \$49.95

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Syntegration
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10-Station Enterprise Edition: \$459.95

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SuperType Master Library sale price: \$19.00

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Order number 239
PCX

MSR: \$189.95

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WipeOut \$42.00

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BOCAsoft, Inc.

MSR: \$59.00

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XFolder Introductory price Thru 3/15: \$19.95

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The Desktop Company

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ZIPMAN for PKZIP/PKUNZIP for OS/2 \$32.00

Order number 345
Software Builders, Inc.

MSR \$39.95

Easy to use graphical interface. Ability to view more than one ZIP file at a time. Drag and Drop files to be zipped. View or execute any file in a ZIP file without first having to extract it.

ZipStream for OS/2 2.1 \$68.00

Order number 295
Carbon Based Software

MSR: \$79.95

ZipStream is an OS/2 Installable File System (IFS) that mirrors access to existing OS/2 File Systems, and simultaneously provides automatic transparent file compression and decompression services.

COMMUNICATIONS

Communications Manager/2 v 1.1 \$310.00

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IBM

MSR: \$495.00

Comprehensive communications processor includes improved 3270 and 5250 terminal emulation, more APPC functions plus features such as Data Compression and Distributed Feature Workstation.

COMMUNICATIONS

EXTRA! for OS/2 v 2.0 \$309.00

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Attachmate

MSR \$425.00



EXTRA! for OS/2 v 2.0 is a 100 percent 32-bit, object-oriented, multi-threaded emulator, with extensive 3270 and APPC/CPI-C support, and full integration with the Workplace shell.

FaxForward call for pricing

Order number 206

MSR: \$3,850.00

Computer Systems Integration, Inc.
FaxForward is an Interactive Voice Response/Fax communication system designed to provide a software development platform for creating integrated voice, fax, database, and host supported applications.

Fax/PM \$99.00

Order number 101

MSR: \$150.00

Microformatic/American TeleRep, Inc.
Fax/PM is the award-winning object oriented fax software for OS/2 and OS/2 for Windows. Use this 32-bit, multi-threaded, multitasking Workplace Shell savvy software to send and receive faxes from any desktop machine.

FaxWorks for OS/2 \$99.00

Order number 102

MSR: \$149.00

SofNet, Inc.
Faxing from any OS/2, Windows, or DOS application via a Class 1, Class 2, or CAS fax modem. The software also includes annotation tools to allow electronic markups, fax broadcasting, and multiple channel options.



10-user LAN version \$495.00

Order number 103

MSR: \$699.00

HODstar™ Pager (single license) \$80.00

Order number 255

MSR: \$85.00

HODstar™ Support Solutions
Permits users to quickly and easily send messages to today's standard pagers. Also creates standalone programs to add pager functionality to any OS/2 batch file, REXX program, and commercial application. Supports all AT-compatible modems. Also available in site-wide and 'unlimited use' license.

HyperACCESS/5 V3.1 \$129.00

Order number 161
Hilgraeve

MSR: \$199.00

Award-winning async comm program includes virus protection, host mode, on-the-fly un-zipping, 12 fast file transfer protocols, 17 terminal emulations. *PC Magazine* Editor's Choice.

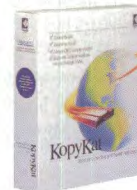
COMMUNICATIONS

KopyKat v1.0 \$129.00

Order number 162
Hilgraeve

MSR: \$199.00

Anything you can do on an OS/2 PC, you can now do remotely through a modem or over a LAN. Displays the entire remote desktop in a window on your desktop.



LAN Distance Version 1.1 Family of Products \$57.95

Order number 343
IBM

MSR: \$69.00



The IBM Lan Distance family of products extends the "office LAN" to remote users. It allows you to transparently dial in and execute office applications as if you were physically connected to the LAN.

LAN Distance Remote AL Cert. \$49.00

Order number 344

MSR: \$59.00

PM2YOU Sale price: \$157.50

Order number 140
Ridax

MSR: \$255.00

Control your OS/2 Desktop and Presentation Manager or character mode programs remotely from another OS/2 or Windows machine via dial-up modems, NetBIOS, APPC, TCP/IP, SPX, or Named Pipes.

PMCOMM 2.30 \$89.95

Order number 105

MSR: \$99.95

Multi-Net Communications
Pmcomm is a full-functioned, 32-bit, GUI, PM communications program. It supports complete key re-mapping, REXX scripting, host mode, pop-up menus, various terminal emulations, and file transfer protocols.

RhinoCom \$179.95

Order number 336
Rhitek

MSR: \$199.00

Advanced Workplace Shell technology, easy customization through extensive macros, REXX scripting, and native OS/2 code make RhinoCom a powerful tool for the sophisticated communications user.

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COMMUNICATIONS

RUMBA for the Mainframe. OS/2 version 3 \$365.00

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Wall Data Inc.

Easy to use OS/2 to Mainframe connectivity with drag and drop file transfer and paste linking of host and PC applications. Interface support for MS SNA Server, APPC and CPI-C 2.0, Novell Netware for SAA and TCP/IP.

TalkThru for OS/2 Sale price: \$125.00

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Software Corporation of America

The premier communications product for OS/2, providing terminal emulation including DEC VT340, file transfer (INDSfile X, Y, and ZMODEM etc.), scripting and support for IBM's EHLLAPI for asynchronous communications.

PRODUCTIVITY

CA SuperProject \$489.00

Order number 208 MSR: \$649.00
Computer Associates

CA-SuperProject is a complete set of project management and presentation tools that are easy to use and learn.

Deluxe American Heritage Dictionary \$44.95

Order number 327 MSR: \$59.00

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The 200,000-word Deluxe Edition is the first completely new dictionary for the 90's. Containing nearly twice as many words as the Standard Edition, it is one of the largest and most authoritative software dictionaries you can buy.

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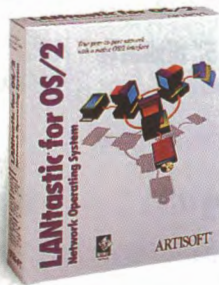
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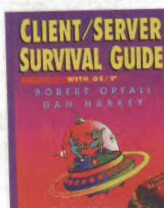
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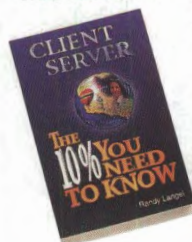
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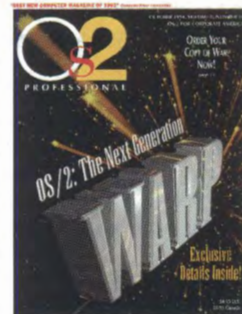
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
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ORGANIZING your desktop

If your desktop is cluttered with folders and icons, consider adding DeskMan/2, Desktop Observatory, or SkyScraper to your utility set.

BY STEVE MASTRIANNI

OS/2 Warp is becoming more popular than ever. One reason is the BonusPak, which contains OS2CIM, an OS/2 version of a CompuServe navigator; IBM Works, a collection of word processor, spreadsheet, database, report writer, calendar, appointment book, phone book, and charting program; FaxWorks for OS/2; HyperACCESS Lite for OS/2; the IBM Internet Connection for OS/2; Multimedia Viewer; Video IN for OS/2; Person to Person, and the System Information Tool. An impressive list, for sure.

But if you're like me, your desktop is already cluttered with folders and icons for the many programs you use regularly. The last thing you need is more clutter. Finding your applications in the resulting chaos can be annoying. Keeping it organized can be a chore. In my case, I travel a great deal and carry a notebook computer wherever I go. The problems only multiply: no matter how hard I try, the desktop on my office machine never looks like the one on my notebook.

I also switch modes as I work. Depending on what projects I'm working on, I prefer different desktop configurations. When I'm writing code, I'd rather not shuffle through icons for my word processing programs, FAX programs, multimedia, shredder, or the master help index. When I'm developing presentations, I would rather not see icons for my editors, compilers, and toolkits.

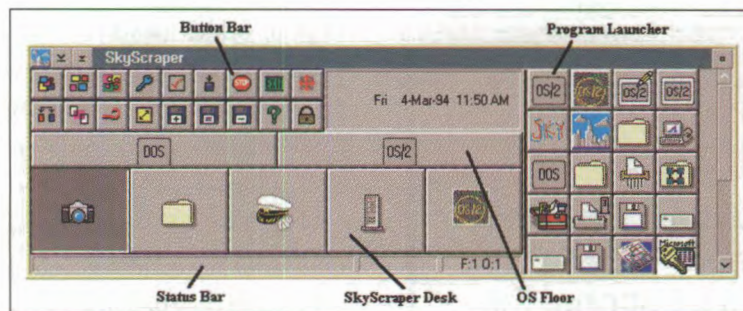
If any of these scenarios describes your workstyle, consider adding a desktop manager to your utility set. We'll review three such programs that help you manage, organize, and secure your desktop: DeskMan/2 1.51 from Development Technologies, Inc.

(DevTech), Desktop Observatory 3.1 from Pinnacle Technologies, and SkyScraper from Binar Graphics.

Installation

What do you expect from an install program? Would you prefer to simply insert a floppy disk or CD-ROM, type SETUP or INSTALL, and have the installation program guide you through a perfect installation the first time? Would you like to avoid hunting through documentation to find magic incantations that make

the process work? My "acid test" for any software is to install it without first reading the manual. Over the years, this simple test has proven a useful barometer of any application's overall usability. All three programs installed easily and smoothly, although Desktop Observatory gave their install program an unconventional name (DOINST), and ended ever so slightly prematurely, forcing me to add manual entries to STARTUP.CMD.



SkyScraper arranges desktops by floors and desks, and comes with a program launcher similar to Warp's LaunchPad. Floors can have several desks and desks can be moved to by using assignable hot keys.

the process work? My "acid test" for any software is to install it without first reading the manual. Over the years, this simple test has proven a useful barometer of any application's overall usability. All three programs installed easily and smoothly, although Desktop Observatory gave their install program an unconventional name (DOINST), and ended ever so slightly prematurely, forcing me to add manual entries to STARTUP.CMD.

DeskMan/2

DeskMan/2 has seniority among the OS/2 desktop managers, and provides a useful benchmark for the others. Using the path settings, DeskMan/2 installed perfectly. The package actually consists of five major components: DeskMan/2, which saves and restores objects on your desktop; PMImage and DM/2 Image, which save and restore your entire desktop; VUEMan/2, which allows you to create 81 different desktops and switch among them; and the Workplace Shell Extensions, which (on the corporate version) allow you to password-protect your desktop, folders, and objects.

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For those of us who frequently confuse objects, folders, and icons, DevTech devotes several pages of the DeskMan/2 manual to explaining these terms and many others. Even among experienced OS/2 users, it's easy to confuse these terms, yet to manage your desktop correctly, it helps to understand the sometimes subtle differences.

To test desktop recovery, I used PMImage to save my entire desktop in just over 2 1/2 minutes. I deleted several objects and then saved a new copy of the desktop. Next, I restored both copies of my desktops, and the restore worked perfectly. In further tests, I used DeskMan/2 to save all of the objects on my desktop and restore them. I also selected certain objects individually, deleted them, and then restored them. Each operation performed without a hitch.

I also tested some of DeskMan/2's special functions that allow you to save time when dragging and dropping objects. For example, you can direct DeskMan/2 to save an object's settings on drop, open an object on drop, or automatically assign an ID on drop. In each case, the functions worked as specified.

I used VUEMan/2 to create what DevTech calls a Virtual Desktop, which allows your desktop to be larger than your actual screen size. It does this by breaking the screen up into separate little compartments that contain small graphical representation of the windows you currently have open on your desktop. You can drag these windows from one Virtual Desktop to another.

Using DeskMan/2's Workplace Shell extensions, you can add extra items to every object's pop-up menu, make objects visible or invisible, close or minimize a folder when an object within that folder is opened, and password-protect the desktop, folders, and objects.

For the corporate user, DeskMan/2 is CID enabled, and special versions support audit control and full-logging capabilities.

SkyScraper

Next, I installed SkyScraper. Except for incorrectly telling me I could install it on my CD-ROM drive, the installation went smoothly. Besides supplying tools to manage your desktop, SkyScraper contains a Program Launcher very similar to Warp's LaunchPad. You can drag and drop applications to the Program Launcher, as well as add objects such as full screen or windowed sessions. Using the manual as a guide, I dragged some objects and placed them in the Program Launcher area and everything worked flawlessly.

SkyScraper arranges desktops by floors and desks. A floor can

have several desks, and you can move among desks using assignable hot keys. I created several different desks for specific uses, again without any problems. Despite the wide segregation between different tasks, you will sometimes find objects that you need for nearly every section (the drives object, for example), an option SkyScraper supports by sharing objects across desks. Like DeskMan/2, SkyScraper let me drag applications across different desks.

Skyscraper contains additional functions like Consolidate, which moves all of your original desktop to your current desk. Arrange applications evenly distributes your objects across the desks you defined. Configure lets you set the maximum number of floors and desks, and you can assign hot keys to each of your desks. Like DeskMan/2, SkyScraper allows you to pan your desktop. And, if you tire of constant mouse operations, you may optionally access all of SkyScraper's functions through hot keys. Should you need some assistance, SkyScraper includes an excellent on-line help facility.

Desktop Observatory

Finally, I installed Desktop Observatory and discovered a few minor quirks. For example when the install program finished, the **Install** button was still highlighted, so hitting Enter started another installation attempt. I aborted this second install and checked my desktop. Desktop Observatory had installed no icon or folder for convenient GUI access. Upon reading the manual, I discovered that I had to manually edit the STARTUP.CMD file to add two lines. While somewhat awkward, this does allow Desktop Observatory to be run from a REXX program or network server.

The next stage of the process was more disconcerting. I had to reboot OS/2 with my original OS/2 boot diskettes, exit the installation into a command prompt, and run DSKINIT.CMD from the Desktop Observatory directory. DSKINIT builds a profile of your desktop and saves it to a file. During these procedures, most of my icons disappeared, leaving me with an uneasy feeling. Desktop Observatory had erased my original OS2.INI file and built its own version. I could only recover my lost icons by running DEINST and changing the attributes of the objects. This is definitely not a task for the average user, and I did not find the procedure documented in the manual.

Overall, Desktop Observatory was much more complex to install and configure than DeskMan/2 or SkyScraper. It appears to be designed as a desktop management application for main-

taining secure desktops primarily in large installations, and is not well suited for the average OS/2 user. Since it doesn't use SOM, it places an unnecessary burden on the user to understand several complex issues related to the Workplace Shell. Just learning to use Desktop Observatory requires a full day of training at Pinnacle's training facility. Users are trained in objects, object attributes, security methods, and LAN support.

In addition, configuring Desktop Observatory requires a detailed knowledge of object attributes such as object ID, parent ID, shadows, object classes, object settings, associations, and resource files. Neither DeskMan/2 nor SkyScraper imposed such requirements.

Once configured though, Desktop Observatory provides configuration and auditing capabilities across a network. Let's say you're the administrator of a 10,000 PC network, and you must add a program accessible to each user. Desktop Observatory can help you make the change and have it automatically installed on every system, including any information stored in extended attributes. Pinnacle claims that building a complex desktop with hundreds of icons takes only around 30 seconds using Desktop Observatory, but I did not verify this. DeskMan/2 can accomplish the same task, but requires some small scripts that Development Technologies will supply upon request.

Desktop Observatory also provides logical desktops that can be customized for each individual user on a LAN client. Each time a particular object is selected, an audit trail is produced to monitor access to that object. The user never sees Desktop Observatory—it runs completely under the covers, allowing the desktop to be set up to resemble a dedicated Windows machine, DOS machine, or menued system. In fact, the user does not even know OS/2 is running. This is ideal in secure environments, such as government offices or banks. (A future version of Desktop Observatory will be C2 compliant.) Attempts to access protected objects are logged, and it can remove all Settings notebooks from an object. Security is provided by security filters that allow partial or exact matches. For instance, you can deny access to any drives, or only certain drives. You can also have Desktop Observatory completely ignore any unknown objects.

Desktop Observatory traps Ctrl-Alt-Del so a user cannot reboot the system, and it works in conjunction with IBM's DCE Security Services and the MicroSAFE security system. Desktop Observatory allows you to schedule events when an object is detected at its launch or exit time. You can specify your program

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name, as well as parameter information. Several sample programs in REXX and C are provided as examples of how to do this.

Which One Did I Like?

Although all of these programs are classified as desktop managers, each seems to be targeted to a slightly different market. Desktop Observatory is targeted at high-end enterprise networks, although DeskMan/2 is also capable of supporting large enterprise installations. Its \$179 per seat price makes it a fairly steep investment. SkyScraper, with its lack of password protection and built-in network support functions, is more of a productivity tool for OS/2 users in a non-enterprise environment. DeskMan/2 contains most of the features contained in Desktop Observatory and SkyScraper, but it takes a little digging to find some of them. At \$79.95, it's hard to pass up. ♦

Steve Mastrianni is an industry consultant specializing in device drivers and real-time applications for OS/2. He is also the author of Writing OS/2 Device Drivers in C, and currently consults for IBM in Boca Raton, Florida.

AT A GLANCE:

Desktop Observatory, v 3.1

Pinnacle Technology
PO Box 128
Kirklin, IN 46050
(800) 525-1650

72642,1313@compuserve.com

List Price: \$179 per seat, site licenses available

DeskMan/2, v 1.51

Development Technologies
308 Springwood Road
Forest Acres, SC 29206-2113
(803) 738-0218; fax (803) 790-9230
71333,3362@compuserve.com

List Price: \$79.95

SkyScraper, v 1.00d

Binar Graphics
30 Mitchell Boulevard
San Rafael, CA 94903-2034
(800) 228-0666
73232,342@compuserve.com

List Price: \$49.95

Remote Control software review

We reality test KopyKat and PM2YOU based on their ease of installation, setup, and performance.

BY BILL NICHOLLS

Remote Control. The phrase conjures up images of an effortless extension of your keyboard and screen to a computer located some distance away. Reality however is still some distance away from that vision. Our reality test included the highly acclaimed Windows product ReachOut v.4.02 from Ocean Isle and two OS/2 products: KopyKat v 1.00 from Hilgraeve and PM2YOU v 1.2 from Ridax in Sweden.

ReachOut from Ocean Isle is available in two versions: a modem-based package (which we tested) and a LAN version. Both OS/2-based products, KopyKat and PM2YOU, were tested from a 486DX/25 with 16MB running Warp GA remote through a variety of modems to a 486SX/33 with 4MB and 8MB running Warp and OS/2 2.11.

Install & Setup

Installation differences were apparent immediately. In OS/2, ReachOut would only complete its install in a full screen Windows session and even then, it would not run under OS/2 in any arrangement I could set up. Therefore, to run our baseline tests, we had to resort to Windows 3.1 under DOS5. ReachOut installed a TSR modifying the AUTOEXEC.BAT and rebooted (an inconvenience). The TSR also required 20KB of low or high memory, a critical resource under Windows.

KopyKat's installation ran much smoother: open an OS/2 window, type A:setup, and choose one or both functions (remote and/or host, called Kopy and Kat respectively). KopyKat built a new folder on the desktop and was ready to go. Setting up the remote was simply a matter of double clicking the Kat icon. Both functions ask for configuration information the first time you start the program. If need be, you can easily change the configuration later.

PM2YOU's installation was noticeably different from the oth-

ers. The install program immediately jumped to full screen character mode with three windows. Prompts were presented in one window for source and destination information. Responses were entered in yet another window that presented no defaults. After the files had been copied from diskette, the ZOO unpacker began overwriting the character mode windows as it unpacked the files. Of the 3.2MB which filled the disk, the original ZOO files (which the install program failed to remove) used 1.1MB. In short, the install program worked, but it took a bit of time to get over the culture shock.

Both OS/2 products handled security adequately. Each user entry had a name, phone number, and optional password, plus comm port and modem setup parameters. KopyKat enhances this feature by keeping the password hidden as it is typed—the password may not be unhidden without the password. As a result, several users can share a system while maintaining individual password security.

Performance

Screen response times are best judged through a program with plenty of screen activity. Therefore, we ran many tests using Klondike Solitaire on the host with the player using the remote system. None of the test configurations provided comfortable playing response, varying from slow to awkward to essentially unusable on the 4MB host system. Character mode applications were always usable, although editing CONFIG.SYS in a graphics window was frustrating. Nevertheless, KopyKat remains a better option than driving to a remote location for a simple fix. Yet the burden of graphics mode significantly inhibits response times for two-way graphics applications even with 28.8 kbps modems and fast processors.

KopyKat performance on a 9600 link was barely acceptable: hardly surprising given the GUI interface. What was more

InnoVal Report on OS/2

Published Weekly

Will OS/2 be a success in the marketplace? It now seems likely that Windows 95 will be released later this year. Software producers, equipment manufacturers, customers, and channel businesses all need to know how to invest money and resources. The issue is not technology. It is market penetration. Marketplace commitment will be tied to expectations about IBM's ability to deliver sufficient market share. It will not be tied to the quality of OS/2.

In the months ahead, *InnoVal Report on OS/2* will focus on this marketplace. With commentary and analysis, we will examine what IBM is doing correctly. We will also discuss where IBM and others seem to be missing the mark. Along the way, we will direct your attention to other sources of valuable information and explore usability topics, new products, events, and services.

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DOT EXE

remarkable was that the actual operations on the 4MB system were noticeably slower than the 9600 link. According to the person observing the remote host, the system was paging heavily. Once the remote system updated its own screen though, the local screen updated rapidly.

The lack of comm port activity during the delays further verified host system sluggishness as the primary contributor to poor performance. Our observations lead us to recommend running KopyKat on a 4MB remote host only as an emergency measure. Ditto for modems slower than 4800 bps. The typical 6-8MB system with a 14.4 kbps modem should be adequate for simple work, and 28.8 kbps should prove useful for limited graphics.

Two of KopyKat's features proved helpful during our testing. The first is the ability to quickly reconnect after the connection dropped, which happened frequently. Unfortunately, the phone on the receiving end had call waiting and we could not disable it before *answering* a call.

The second useful feature is the refresh option. My local screen would occasionally get out of sync with the remote when I made too many moves before the remote could process them. A full screen refresh took about ten seconds with a fairly busy screen on the 9600 link. But if you ever need to use this feature, select the **Refresh** command (under the **Action** Menu) with care as it is right next to the **Disconnect** command.

The remote 640 x 480 x 256 screen fit comfortably in my 800 x 600 x 256 display. Remote screens of higher resolution than the local screen are a nuisance because of the need to scroll locally to see part of the remote. If you plan to support remote systems full time, demand at least a 17-inch screen at 1024 x 768 or higher. Also note that KopyKat lacks a file transfer option, which could prove problematic for heavily used support operations.

Once past the clunky install program, PM2YOU was difficult to get working. The documentation was laconic to the point of obscurity, with general illustrations and very little in the way of "how to" examples. Lack of good documentation was aggravated by several test sessions that connected and froze. After eliminating other possibilities (with a 40-mile journey between each new configuration tweak) we found that PM2YOU V1.2 host mode freezes under Warp when run in a windowed session. Using it with Warp requires a full screen session.

Once it was up and running, however, PM2YOU proved to be a flexible product, supporting both character and GUI mode interfaces, selected from the remote.

DOT EXE

PM2YOU has several features that enhance its flexibility and performance. For example, you may use the system locally while in host mode by running the host in a background session. A remote user may work in character mode while the local user simultaneously accesses the host system. Furthermore, when tweaking performance, the remote user may adjust the PM2YOU parameters on the host. We used this remote tuning feature to test the effect of compression and priority options without ever touching the host system 40 miles down the road.

Surprisingly, the communications performance was not constrained by a 14.4 kbps modem. Even after turning off all compression, lowering the screen refresh delay, and increasing the priority of host and remote sessions, any action at the remote caused a pause, modem activity, then screen refresh. At no time could I lower the pause to less than 1-2 seconds, even for trivial operations.

Despite the startup complexity and communications delays, the operation of PM2YOU was more flexible than KopyKat's. It includes file transfer and the ability to lock the remote out of specific file areas, controlled by user name.

Overall PM2YOU seems better suited for experienced technical users due to its limited documentation and operational problems in GUI mode. Character support is effective, and once you figure out how to transfer files, the transfers are fast and easy. GUI mode performs slower than we can account for by the modem speed alone, with frequent (and unwanted) appearances of the wait clock icon on the remote system, even when nothing appears to be happening.


Summary

PM2YOU has good character mode support, fast file transfer, obscure documentation, and expensive GUI mode support. It also markets a Windows terminal program that can access the OS/2 host mode (both text and GUI). However, the GUI performance and problems, combined with its high price and overseas support, restrict my recommendation to experienced users who will primarily run character mode applications.

KopyKat's two current limitations are the lack of cross-platform support and the absence of a file transfer mode. Hilgraeve support representatives said that both features are under development, and KopyKat 1.1, scheduled to ship Q1 1995, will support file transfer. A cross-platform version including Windows 3.1 and its variations will follow later. Hilgraeve was understand-

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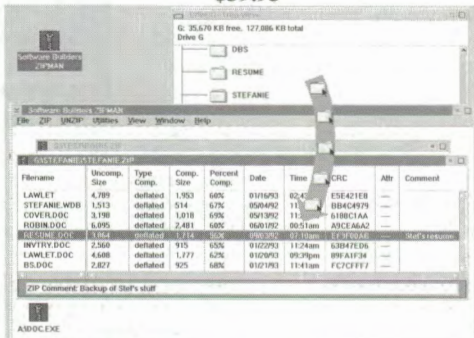
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DOT EXE

ably indefinite about when these other OS environments would be supported.

KopyKat, version 1.0, works better than I expected. It provides easy installation, immediate operation, reliability under stress, and it even manages to work in a 4MB system. The shortfall of file transfer will be corrected, and the future cross-platform support makes this product a potential winner in the small company support marketplace. On the downside, the single user price of \$199 seems excessive for a product without file transfer. Hilgraeve could jump start their sales with a special version 1.0 under \$100. At that level, one remote support call could well recoup the initial investment. ♦

Bill Nicholls has been in the computer industry for 30 years. He is active in OS/2 beta programs and has written for computer publications since 1986. He can be reached at billn@bix.com.

AT A GLANCE:

KopyKat

Hilgraeve, Inc.

111 Conant Ave., Suite A

Monroe, MI 48161

(313) 243-0576; fax (313) 243-0645

List Prices: For companies requiring support for multiple remote sites, quantity discounts are available. Hilgraeve offers 2 and 10 packs, and discounts for multiple packs. A single user 2 pack lists for \$199. Three 2 packs are \$175.50 each. A 10 pack is \$795, and two 10 packs are \$738.25 each. Better prices may be available in the reseller channel.

PM2YOU

Ridax Software Development

Kransen 4E

41672 Gothenbur

Sweden

(011) 463-1196-074; fax (011) 463-1196-417

List Prices: Pricing is in Swedish Kronor and will vary with exchange rates. Approximate price: \$268/\$241 (U.S.) for single/10 copies of the complete graphic and character mode package, and \$94/\$81 for single/10 copies of the character mode only version.





MARKETLINE

Product News for the OS/2 User

SCOOPS

Partition Magicians

Power Quest Corporation is proving that getting recognized by IBM isn't quite as difficult as some developers like to claim. Partition Magic, the company's latest product, allows users to shrink or expand FAT and HPFS partitions while keeping all data intact. "We've been in constant contact with IBM and they've been very supportive," Bob Miller, vice president of marketing told

OS/2 Professional.

When it comes to attracting IBM's attention, Miller offers this advice: "It all comes down to the product. If you're going to come out with just another *me too* product, you're not going to get the support. There's a need for our product, one of the things it does is make it easy to install Warp. So we're going to get support."

Originally slated to ship at

the end of January, Miller told *OS/2 Professional* that the product will be available by early March. "The delay is not as bad as those we see from some of the larger companies and typical of a small company where everyone wears multiple hats," said Miller.

Partition Magic is designed for users who want to tweak their partitions without having to back up their drives,

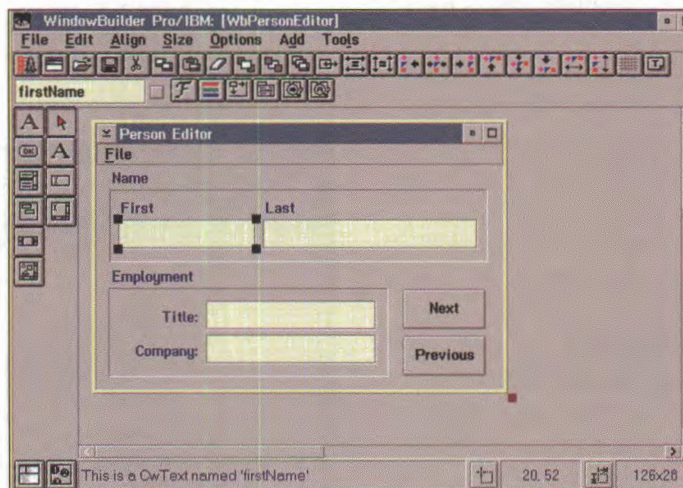
run FDISK, FORMAT, and re-install their OS. The utility allows resizing of partitions and the conversion of FAT partitions into HPFS. Miller told *OS/2 Professional* that Power Quest is currently working on converting HPFS to FAT because, "whenever you give someone the ability to change something, you have to give them the option of returning things to the way they were."

New Products

Making Smalltalk

WindowBuilder Pro for IBM Smalltalk, a set of tools for programmers building user interfaces for application programs in IBM Smalltalk and VisualAge, is now available for Windows and OS/2 from ObjectShare Systems, Inc.

WBPro allows programmers to construct applications without the high learning curve normally associated with Smalltalk's underlying Motif windowing system. Because IBM's Smalltalk does not include an application framework, WBPro utilizes and ships with WBAApplication, a Motif-compliant applications



WindowBuilder Pro allows programmers to create applications more easily, lowering the Motif's learning curve.

framework.

WBPro features specialized editors for native widgets and a generic editor for editing

other commands. By forming compounds of lower level controls, command controls constructed with WBPro may be

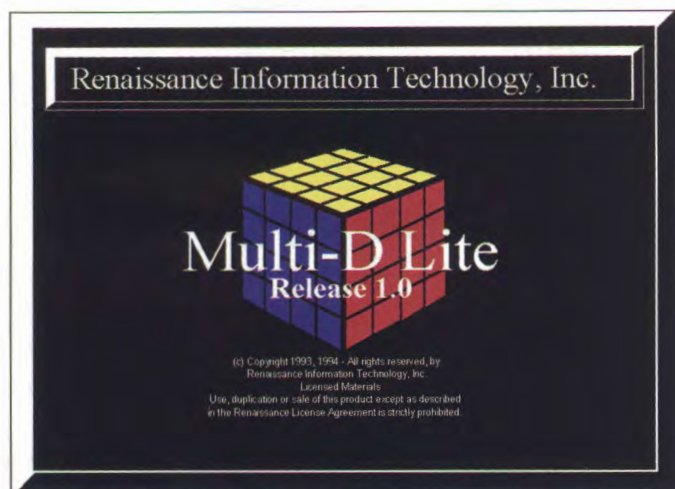
merged into higher levels.

WindowBuilder Pro costs \$495 for the standard application and \$695 for the Team version.

ObjectShare Systems, Inc., 5 Town and Country Village, Suite 773, San Jose, CA 95128-2026. (408) 970-7280, fax (408) 970-7282.

Standard access

ObjectSpace, Inc., is shipping the newest version of Standard Template Library <Toolkit>. Based on the accepted ANSI/ISO standard for the C++ programming language, the STL <Toolkit> provides programmers greater



Renaissance Information Technology's Multi-D Lite is tightly integrated with Lotus 1-2-3 and allows users to create three-dimensional spreadsheets.

3-D spreadsheets

Renaissance Information Technology, Inc., has released Multi-D Lite, a single workstation version of the company's multi-dimensional database server (RServer) with a Workplace Shell-like Graphical User Interface (RGUI).

The native OS/2, 32-bit application is tightly integrated with both Lotus 1-2-3 Release 4 (for Windows under Warp) and Lotus 1-2-3 for OS/2 (version 2.0.a or later). This integration permits users

to drag and drop data onto rows, columns, or sheets with or without specifying selection criteria.

Regularly \$249, Multi-D Lite is available through the end of March for the introductory price of \$199 (Lotus 1-2-3 is sold separately). Renaissance Information Technology, Inc., 621 W. College Street, Suite 201, Grapevine, TX 76051-2507. (817) 421-8127, fax (817) 481-1469.

access to that standard.

The product is a cross-platform commercial implementation of STL offering multi-thread extensions, including read and write locking. It is also the only version of STL compatible with cfront-based compilers. Such cross-platform availability allows users to choose OS/2, Windows, or UNIX environments.

The STL <Toolkit> is included free with ObjectSpace's ObjectSystems, which is available for \$875. It may also be purchased separately for an introductory price of \$149.

ObjectSpace, Inc., 14881 Quorum Drive, Suite 400, Dallas, TX 75240. (214) 934-2496, fax (214) 663-3959.

Back it up

Colorado Backup for OS/2, a new release from Colorado Memory Systems, is now shipping. The system, featuring bi-directional data exchange between DOS, Windows, and OS/2, allows users to schedule unattended

backups, and create macros for routine delayed-run backups.

Colorado Backup for OS/2 also features two-disk recovery capability for quick system rebuilds, full HPFS and FAT support, and compatibility with IBM LAN Server and Microsoft LAN Manager.

The system price varies with options, and requires a minimum 386-based PC or file server, OS/2 version 2.1 or higher, 2MB hard disk space, and a recommended 8MB of RAM.

Colorado Memory Systems, 800 South Taft Avenue, Loveland, CO 80537. (303) 635-1600, (303) 669-8000, fax (303) 667-0997.

Assisted assignments

Creative Assistance Software's new release, NetPM 2.0, provides additional LAN configuration options while allowing IS managers to assign resource aliases and group applications.

The software provides eight real-time graphs of server, server requester, or local regis-

ter statistics, and is backward compatible to LAN Server 3.0 and OS/2 2.0.

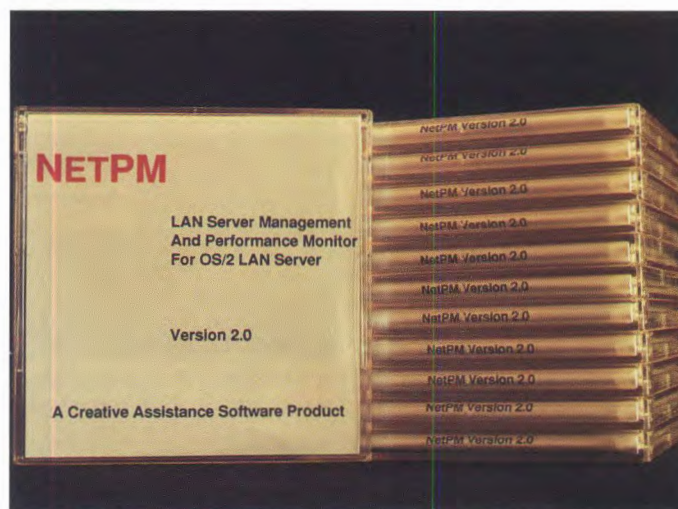
NetPM 2.0 is available for \$299 with additional licenses priced at \$239. Site licenses are \$2,000. Creative Assistance Software, 9431 Kings Falls Drive, Charlotte, NC 28210. (704) 544-0001, fax (704) 543-6366.

Desktop architecture

Binar Graphics, Inc., has designed its latest release of

SkyScraper, a Desktop Manager for OS/2, for full compatibility with OS/2 Warp.

The software provides a visual representation of OS/2's multitasking capabilities, allowing users to view their OS/2 display as one "desk" in a larger "virtual office". The product enables users to run fully-maximized desktops concurrently. With a single click, users can switch between applications.



Net PM 2.0's graphs and stats make it easier for IS managers to monitor their systems.

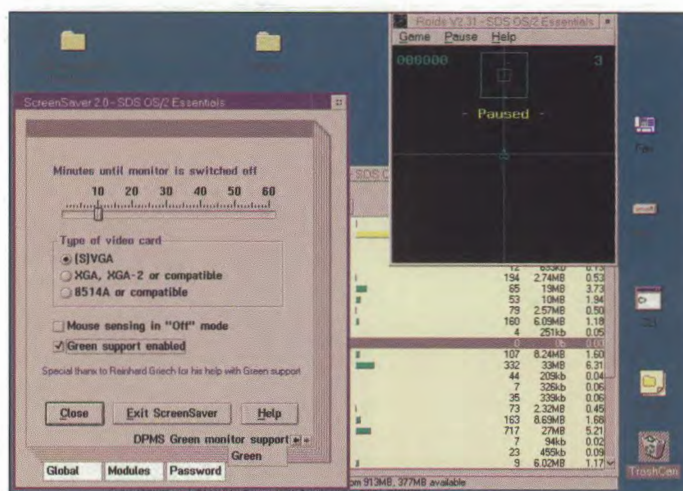
MARKETLINE

The software also allows users to launch programs and full-screen DOS sessions. It memorizes desktop arrangement and simplifies start-up by automatically restoring the memorized arrangement. Through manual configuration of SkyScraper's Arrange Applications feature, users can organize applications according to task.

Binar Graphics, Inc., 30 Mitchell Boulevard, San Rafael, CA 94903-2034. (800) 228-0666, (415) 491-1565, (415) 491-4182, fax (415) 491-1164.

Stardock's suite

Stardock Systems, Inc., is now shipping OS/2 Essentials, a suite of so-called mini-applications now available for Warp. The product includes non-standard OS/2 features such as DirMaster for OS/2 (an advanced file manager), and Screen Saver 2.0. OS/2 Essentials also features Roids, a multimedia arcade game; a Filebar task manager—which acts as a launchpad/tasklist replacement; and File Graph/PM, a multithreaded directory space graphing tool. The product is priced at



Stardock's OS/2 Essentials is a suite of utilities that enhance the user's desktop organization.

\$24.95. Stardock Systems, Inc., Gibraltar, MI 48173

(313) 207-1779, (313) 782-2248, fax (313) 782-9868.

News

29 million more to go

In contrast to the initial outcry concerning IBM's failure to adequately market Warp, Big Blue in mid-January announced that it had shipped one million copies of the product since its release last November. The product is doing well worldwide, with a return rate of under one tenth of a percent, according to IBM. The numbers don't give a complete picture however, as the company still has yet to find a way to track whether the people buying Warp are new OS/2 users or existing users upgrading to the new version.

The product, says IBM, was ranked among the top three software titles sold in the U.S. during the months

of December and January, also weighing in as the United Kingdom's biggest software seller in December.

Stac attack

Showing its commitment to the OS/2 platform, Stac Electronics has brought its Stacker data compression tool up to par with the DOS and Windows versions of its product.

Bruce Behymer, Product Manager for Stac, stopped by the OS/2 Professional office with a sneak peek at Stacker 4.0 for OS/2. Prior to this upgrade, Stac's OS/2 product was at version 1.1. Behymer defended the version jump as an illustration that the product has finally reached parity with the company's DOS and Windows products, also at

version 4.0. The new version for OS/2 matches the greater than 2:1 compression offered by its DOS and Windows counterparts.

Currently, only FAT partitions can be compressed using Stacker. Sources close to the company say that a legal oversensitivity as a result of their litigation with Microsoft is responsible for the delay of HPFS support. Now that the company has received the necessary HPFS documentation from IBM, the development process is now underway, albeit one with all the proper paperwork intact.

Multiplatform multimedia

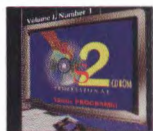
With hopes of becoming the industry standard for multimedia development,

Macromedia recently announced the addition of OS/2 to its list of supported platforms. The addition will enable developers using Director 4.0 for Windows or Macintosh to port their CD-ROM titles to OS/2.

"The end result," says IBM spokesman John Crowe, "is that it helps both of the companies." Continuing, Crowe explains, "It's particularly significant because Macromedia owns about 70% of multimedia development tools worldwide."

For the moment, however, no firm ship date has been set. Yet according to company sources, Director Player for OS/2 Warp should be ready in the latter half of this year, perhaps as early as Q3. ♦

THE



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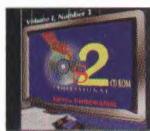
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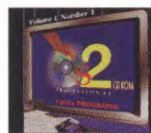
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SLIP with a Click

BY LEN DORFMAN

Readers should now be SLIP-sliding with little, if any trouble. Last month in Hands On we demonstrated a simple to understand and effective multi-step method for enabling SLIP. Now, wouldn't it be nice to have a single mouse button click enable SLIP? This bit of wizardry requires more effort on the part of the person configuring the system. In fact, it demands a bit of REXX programming. In order to enable SLIP with your local Internet provider, you must pay the price of learning to modify the script Mike Davis, a Team OS/2 member and Systems/LAN/WAN Administrator for Apertus Technologies in New York City, generously provided for this article.

The process outlined here requires three source files. Two are short-and-sweet configuration files: slip.cfg and resolv. The third, a REXX program called newslip.cmd, is long, complex, and may prove difficult for some of you to modify. Understand that modifying the newslip.cmd file and getting it to work will most likely be a time-consuming process. So, I suggest you consider the effort "play." After all, you should already have your static IP addresses with SLIP enabled and working just fine with your local access provider. Enabling SLIP via a single mouse button click is just icing on the cake.

To reduce confusion with Mike's REXX script, I trimmed the voluminous comments and focused only on those features of the script that need modification in order to enable SLIP. If you wish to have a look at Mike's original mdslipup.cmd or retrieve the listings from the column, you can download them from *OS/2 Professional's* listings on bix (os2.pro/listings) or via anonymous ftp at ftp.li.net (in the pub/os2 directory).

As with last month's column, we'll assume you have static IP and Annex IP addresses from your Internet provider. If you are fairly comfortable with REXX, you can modify the script to watch for the address and pass it along to the appropriate commands (Mike's mdslipup.cmd includes parsing instructions). Before you

LISTING 1

```
DialType='T'          /* T for tone; P for pulse. */
DialNumber='2651682' /* Service provider number */
LoginName='YourUsername' /* Your login name. */
Password='YourPassword' /* Your password. */
ComNumber=1          /* 1 for COM1, 2 for COM2. */
LoginStart='CR' /* 'CR' for login with cr; else '*' */
LoginPrompt='ername:' /* Prompt for login name. */
PwPrompt='ssword:' /* Prompt for password. */
ThirdPrompt='ommand:'
/* Prompt for connection type. */
ThirdAnswer='slip'
/* LI Net the third prompt reply */
MyIPAddress='199.171.6.21' /* Your IP address */
Gateway='199.171.6.6' /* Your Annex address */

/* COM PORT SET UP */
'mode com'ComNumber': 57600,'n','8','1',
'xon=off','idsr=off','odsr=off','octs=on',
'rts=hs','dtr=on','buffer=on'

/* MAIN SCRIPT CODE STARTS HERE */
cr='0d'x
crlf='0d0a'x
/* THIS SECTION DIALS THE PHONE */
Dialcmd = 'ATD'DialType||DialNumber
DialCnt = 0
call DoDial
do while waitfor('CONNECT', '45')=1
  call lineout , 'timed out, hangup modem..retry.'
  call send 'ATH' || cr
  call waitfor 'OK', 3 ; call flush_receive 'echo'
  if RC = 1 then do
    call lineout , 'Modem not resetting... Trying again'
    call send '+++'
    call waitfor 'OK'
    call send 'ATZ' || cr
    call waitfor 'OK', 3
  end
  call DoDial
end
call waitfor crlf

/* THIS SECTION IS THE LOGIN SEQUENCE. */
if LoginStart = 'CR' then call send cr
/* send CR if required */
call waitfor LoginPrompt /* Wait for prompt for */
call flush_receive 'echo' /* username and reply */
call send LoginName||cr /* with your login name. */
```


CODE CACHE

```
call waitfor PwPrompt /* Wait for prompt for */
call flush_receive 'echo' /* password and reply */
call send Password || cr /* with your password. */
call waitfor ThirdPrompt /* Wait for the menu
                           prompt and */
call flush_receive 'echo' /* respond with "SLIP"
                           or "2" or */
call send ThirdAnswer || cr
                           /* whatever is required. */
call flush_receive 'echo' /* Show it, and */

/* CONFIGURE THIS HOST */
say 'SLIP Connection Established'
say 'Configuring local address =' MyIPAddress Gateway
'ifconfig sl0' MyIPAddress Gateway 'route -f add default'
Gateway '1'
exit 0
/* All done; end of main routine. (callable routines
   follow...) */

/* ONLY CALLABLE ROUTINES BELOW THIS POINT */
send:
parse arg sendstring
call slip_com_output 'sl0' , sendstring
return
```

modify the newslip.cmd file you'll need to get some very important information, which will simplify the modification.

- Request a static IP and Annex IP from your provider.

In my case, my IP address is 199.171.6.21. My Annex IP address is 199.171.6.6. Your IP addresses will also follow this format.

- Request the domain name from your provider.

In my case, my domain name is li.net.

- Request your nameserver IP address.

In my case, LI Net's nameserver address is 199.171.6.12.

Armed with this information you're now ready to collect details about every step of your login process. For example. Let me provide you with an outline of LI Net's login process:

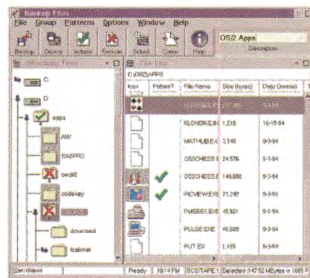
- Using my telcom program, I dial LI Net's number (265-1065).
- The remote system displays a prompt telling me to press the Enter key to initiate the login procedure.

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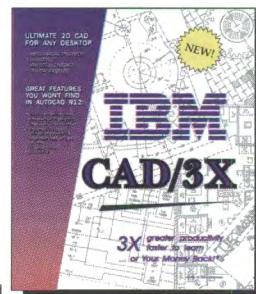
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For more information circle #252

For more information circle #196

CODE CACHE

- LI Net then displays the **Username:** prompt.
- I type my username and press Enter.
- LI Net then displays the **Password:** prompt.
- I type my password and press Enter.
- LI Net then prints a menu followed by the **Command:** prompt.
- I type the word **slip** and press Enter.
- LI Net reports the following information to the screen:

Your IP address is 199.171.6.21 Your annex address is 199.171.6.6.

Since LI Net was kind enough to provide me with a static IP address, I need not parse the returned data.

Once you have obtained the login information, it's time to create your slip.cfg file. Here's my slip.cfg file:

```
interface sl0 { device=COM1
    mtu=1496,
    compression=off,
    attachcmd=newslip.cmd }
```

If your modem is not set to COM1, change the COM

```
waitfor:
parse arg waitstring , timeout
if timeout = '' then timeout = 5000
waitfor_buff = ''
done = -1
TimerVal = TIME('R')
do while (done = -1)
    line = slip_com_input('sl0',,10)
    if timeout>50 then
        call charout , line
        waitfor_buff = waitfor_buff||line
    if pos(waitstring,waitfor_buff)>0 then DO
        done = 0
        DO UNTIL line = ''
            line = slip_com_input('sl0',,100)
            waitfor_buff=waitfor_buff||line
        END
    END
    TimerVal = TRUNC( TIME('E') )
    If TimerVal<>LastTime & Timeout<50 then
        call charout,CR||"Elapsed time:" TimerVal " "
    LastTime = TimerVal
    if TimerVal>timeout then do
        call lineout , ' WAITFOR: timed out '
        done = 1
    end
end
```

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For more information circle #201

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CODE CACHE

```

end
return done

flush_receive:
parse arg echo
if (echo \= '') then
    call charout , remain_buff
    remain_buff = ''
do until line = ''
    line = slip_com_input('s10',,100)
    if echo \= '' then call charout , line
end
return

DoDial:
call flush_receive
DialCnt = DialCnt + 1
If DialCnt>10 then DO
    say "...aborting after 10 tries."
    exit
END
call slip_com_output 's10' , dialcmd|cr
OutString = 'Now Dialing (#'DialCnt')...'
call charout , crlf|OutString|crlf
return

```

number to the one your modem is set to. The slip.cfg file should be placed in the \tcip\etc directory.

The resolv. file is also placed in the \tcip\etc directory. My resolv file looks like this:

```

domain li.net
nameserver 199.171.6.12

```

Simply substitute your local Internet provider's domain name and nameserver IP address for LI Net's.

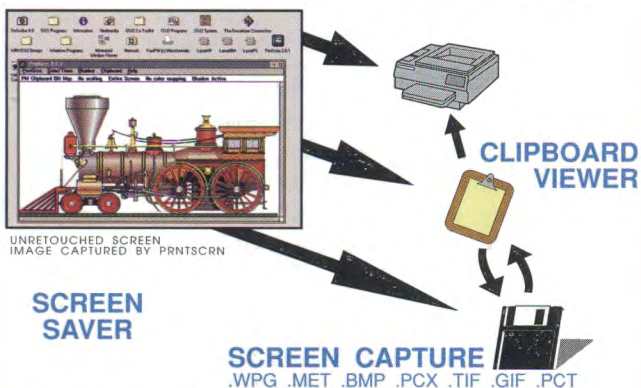
It's now time to tailor the newslip.cmd file to work with your local Internet provider's system. Find the area of the newslip.cmd file listing where you're permitted to set up your own variables. Here's a snippet of demonstrative code:

```

DialType = 'T'
DialNumber = '2651065'
LoginName = 'ldorfman'
Password = 'MyPassword'
ComNumber = 1
LoginStart = 'CR'
LoginPrompt = 'ername:'
PwPrompt = 'ssword:'

```

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CODE CACHE

```
ThirdPrompt = 'ommand:'
ThirdAnswer = 'slip'
MyIPAddress = '199.171.6.21'
Gateway = '199.171.6.6'
```

Change these variable values to match your system's and provider's login procedures. Note that the variable LoginPrompt's 'ername:' is the tail end of LI Net's Username: prompt, just as the variable 'ssword:' specifies the tail of Password. The variable ThirdAnswer is the command that enables enables SLIP over LI Net. Note that your provider might not require a ThirdAnswer and may have prompt names that differ from Username: and Password: (for example, Userid> and Password>). The remaining variables specify touch tone dialing, the low-speed line number for LI Net (2651065), my username, and my password.

Let's take a look at how the variables are acted upon in the newslip.cmd file.

```
/* Start with CR if required. */
if LoginStart = 'CR' then call send cr
call waitfor LoginPrompt
call flush_receive 'echo'
```

```
call send LoginName || cr
call waitfor PwPrompt
call flush_receive 'echo'
call send Password || cr
call waitfor ThirdPrompt
call flush_receive 'echo'
call send ThirdAnswer || cr
call flush_receive 'echo'
```

In the sequence listed above, the script begins with a Carriage Return (if required) and then waits for the LoginPrompt (Username:). When the Username: prompt appears on the display, the script sends my username (ldorfman) to LI Net. The PwPrompt (Password:) appears and REXX sends my password to LI Net.

Once I'm logged in, the script writes (echos) the LI Net menu to my display and the Command: prompt appears. The REXX script sends the "slip" option (or whatever enabling command you use for the third answer) and slip is ready to go. The entire script appears in Listing 1, which includes the routines called by the previously listed lines, and the commands that pass control to the Internet Access Kit.

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For more information circle #204

For more information circle #258

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CODE CACHE

Your task now is to modify this portion of the REXX script to match the login procedure of your local access provider. When you're ready to test your modification to the newslip.cmd file, place it in the \tcip\bin directory.

Note that your slip.cfg file has a parameter called attachcmd—this tells the slip.exe program to run the named program at start-up (in this case, newslip.cmd), so if you have changed the REXX program name, make the appropriate adjustment to the slip.cfg file. Now run the slip.exe program, and if everything's set properly, you're ready to surf the net. If not, you may need to tweak the program a few times to get the prompts and answers set correctly. So, if at first you don't succeed...

Once you have SLIP up and running properly, create an icon for the slip.exe program and drag it on to your Launch Pad. And, lo and behold, you'll have one mouse button click access to the Internet via your local Internet provider. Way cool!

If you're still having trouble enabling SLIP and have access to a World Wide Web text or graphical viewer, the most comprehensive description I've seen on SLIP/tcp-ip is contained in the following document:

<http://pclt.cis.yale.edu/pclt/winworld/os2.htm>

That's right, the document is named os2.htm and not os2.html.

Once I had SLIP properly enabled and working on my system, S.R. (my reclusive mentor in Beantown) pointed me to a few programs on the 'net that act as handy alternatives to IBM's offerings. As you're assembling your Internet access programs I'd strongly suggest that you take a look at C-Kermit for telnet use. You can find it via anonymous ftp at:

kermit.columbia.edu/~kermit/archives/cko190.zip

or

kermit.columbia.edu/~kermit/os2test/ckoker32.exe

I also suggest that you take a close look at NetSuite's tools. You can find them via anonymous ftp at:

hobbes.nmsu.edu/pub/os2/32bit/network/netsuite1a.zip

You're bound to find other goodies as you're SLIP-sliding away. And remember to dress warmly! ♦

Len Dorfman, Ph.D., is a teacher, writer, and periodic programmer. He can be reached on the Internet at ldorfman@li.net.

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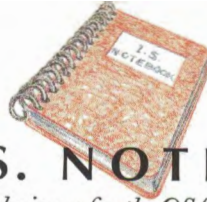
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THE I.S. NOTEBOOK

Tips and Techniques for the OS/2 Professional

Help on the Highway

BY GORDON SCOTT

When it comes to PC operating systems, you get what you pay for. There is just no other way to describe why some people spend the time and money to load, install, learn, and maintain Windows, instead of vanilla DOS. It's also true for OS/2. The arguments in favor of someone using Windows over DOS can be repeated, with emphasis, for using OS/2 over Windows.

The plain truth is that you can't expect to run Windows or OS/2 in a system built to be a DOS machine. You can't expect to be up and running as quickly with a graphical environment as you could with plain old DOS. And you can never get the benefits from plain old DOS that you get with OS/2.

Working with OS/2 Warp—when it works the way it should—is a dream come true. Struggling with OS/2 on hardware and software combinations better suited for DOS is a nightmare. I speak from experience. Getting Warp up and running on my machine at work was a blissful experience. Doing the same for my home machine was an unqualified disaster.

To overcome the limitations of my home system and get Warp installed, I had to use every means of help available to me. Fortunately, there are several means of help available, and those using OS/2 at work are better suited to take advantage of them—if they know how. Hence, this month's collections of sources for help when you or someone in your department has OS/2 problems.

For serious installation problems, dial OS/2 support at (407) 994-5544.

The 800 number only takes you to a voice-mail menuing system with answers to frequently asked questions and tips on common problems. This system can be helpful if you are installing OS/2 for the first time and don't have an experienced OS/2 guru around to answer questions or keep you from overlooking obvious mistakes.

But if you know you are having a problem that is out of the ordinary, or if your OS/2-guru friend is stumped with the problem, then don't expect help from the 800 number. Just call the toll number. Have a pencil and paper ready to write down the numbers they will give you for problem tracking—and don't lose that paper!

Browse the Warp Pharmacy on the World Wide Web.

- Install the Internet Access Kit from the Warp BonusPak.
- Register a connection to the Internet through IBM.
- Select the icon "Retrieve software updates" to download IBM's Web Explorer software.
- Start the WebExplorer.
- Use the file menu to open this document (URL):
<http://www.zeta.org.au/~jon/WarpPharmacy.html>
or in the U.S. open this document:
<http://www.intac.com/nnjos2/Pharmacy/WarpPharmacy.html>.

The Warp Pharmacy is an innovative approach to getting help for OS/2 problems. Jon Seymour, an IBM employee from Sydney, Australia, set

this resource up on the World Wide Web (WWW) on his own time.

According to Jon, "It has proved very successful thus far. Since first going on line on December 5, there are connections from around 100-200 different sites each day with about 80-85 percent of those connections from first-time visitors."

I personally found this resource to be a pleasant way to get help with my OS/2 problems. IBM's own WebExplorer is probably the best Web browser available for sheer ease of use and simplicity. And connecting to the Warp Pharmacy is a great way to find out all sorts of information about Warp problems and their solutions.

The Pharmacy is divided into "shelves" full of remedies. For example, the Hardware shelf contains "a selection of tonics" for various hardware components—such as an ATI video board or a Mitsumi IDE CD-ROM drive. The Software shelf contains tips and fixes for software related problems—such as a Multimedia Install quirk, and information for running certain Windows applications under Warp. The Pharmacy also features a Symptoms shelf and a Procedures shelf. Each shelf is loaded with helpful information and even some references to official problem reports (APARs) from IBM.

If you have a Web connection, or someone close to you does, check out a Warp Pharmacy Web site near you. There are mirrored sites for the Warp Pharmacy in Canada, Singapore, and Switzerland in addition to the U.S. mirror and the original site in Australia.

Use Internet FTP to get fixes or help from various FTP sites.

THE I.S. NOTEBOOK

If you have an Internet connection, but haven't bothered to get a Web browser yet, you can get the next best thing to the Warp Pharmacy by using an anonymous connection to various FTP sites for OS/2 fixes and information.

These sites often include more than driver updates or installation tips. They may also have a good selection of OS/2 public domain utilities and shareware. Three of the better known OS/2 FTP sites include:

ftp.cdrom.com
hobbes.nmsu.edu
software.watson.ibm.com

**Call the IBM U.S. PC Company
BBS at: (919) 517-0001.**

- Using your communications software, dial and log into IBM's OS/2 support BBS.

If you don't have an Internet connec-

tion, but you do have a modem, you can dial directly to this BBS and download the files you need. This BBS contains all the latest device driver updates available for OS/2 and information about how to install them. It also includes other information about known problems and solutions for them.

One of the problems mentioned in the OS/2 installation README file is that certain versions of BIOS in a variety of computer systems require that Shadow RAM and RAM cache be turned off. The problems may not show up until later. Things may appear to install properly, but then run erratically afterwards. Not all machines require this, but if you are having problems installing you should probably take this precaution.

**Disable RAM cache and
Shadow RAM before installing
OS/2 Warp.**

- Before installing OS/2, check your system's hardware manual or setup routine's on-line help to find out how to disable a RAM cache or Shadow RAM.
- Disable these as specified by the hardware manufacturer,
- Install OS/2.
- Run a few applications to make sure everything works correctly.
- Make necessary adjustments or do a selective installation to add various drivers.
- Enable the RAM cache and Shadow RAM when all is working well. ♦

Gordon Scott works for the Electronic Publishing Group at IBM, which offers services for developing on-line information meant for CD-ROM or Internet distribution. Gordon's e-mail address is GBS at VNET.IBM.COM. The Electronic Publishing Group can be reached at 1-800-926-0364.



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For more information circle #88

Dynamic Data Exchange for OS/2

by Glenn T. Puchtel, VNR Computer Library, 172 pages, \$36.95

REVIEWED BY JAMES NORMAN

Do you ever wonder how some software can efficiently support cross-application data linking? Are you ever amazed when the person giving the demo says "When I change something in the spreadsheet, it automatically changes in the Ami Pro document...?" Now, we all know that it is not magic at work here—it's good old-fashioned programming! However, the way Dynamic Data Exchange (DDE) is implemented in OS/2—one could almost believe in magic.

The author of *Dynamic Data Exchange for OS/2* is Glenn Puchtel, an engineer on the OS/2 development team and a well known speaker at OS/2 symposiums and conferences. He is playfully accused of being an evangelist about the power of DDE. There has rarely been a question about the linking of two programs that he cannot handle or work with until an answer emerges. His experiences with explaining the whats, whys, wherefores, and hows led to writing this book.

The book includes a diskette that contains the source and compiled versions of the illustrations used throughout the text. Including the code makes the book more useful and provides quicker and better results in your own environment. It also provides a good example of how to do DDE.

DDE supports the exchange of data between applications, independent of vendor, if each of the applications agrees to the data type and the protocol. This is how Ami Pro and 1-2-3 exchange spreadsheet information. OS/2 is an integrating platform; not one that just supports user clipboarding. In OS/2,

exchanging data is not as simple as accessing the resources of another program. In a multiprocessing, protected environment like OS/2, the memory protection schemes that protect one application from another make the understanding of the DDE formats and protocols more important than in systems without memory protection.

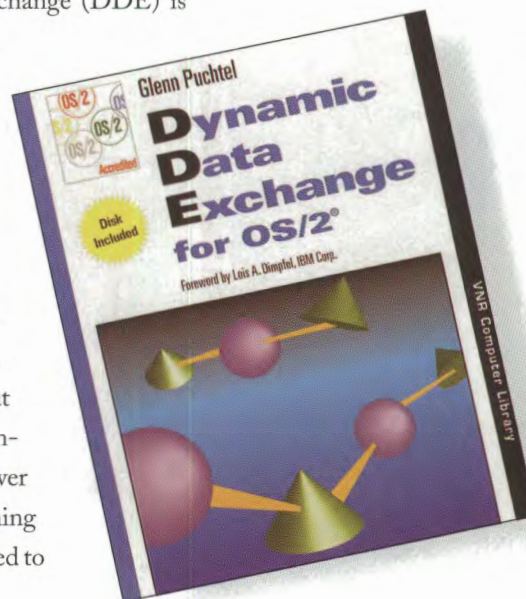
A user views data exchange as copy and paste with a clipboard. DDE offers the application designer significant power to build routines that continuously communicate with each other. Perhaps one operation monitors a realtime activity and another takes the data and builds reports or updates a database at specified intervals. The author uses these examples as the base upon which to explain why his view of DDE is similar to the client-server model.

The book focuses on the construction of a sample client and a sample server with both source and object code. Throughout, the

author shows C language code spread out so that each parameter is on a single line with a comment. This makes the code segment easy to read and understand. This technique is used in teaching environments and many commercial programming departments use it to ensure adequate documentation for their C language programs.

Each chapter uses the background, the code, and a summary to explain the concepts of Dynamic Data Exchange. The author spends enough time on the exceptions so that there should be few surprises as you build your own model. A section in each chapter

continued on page 71



Object-Oriented Programming Using SOM and DSOM

by Christina Lau, VNR Computer Library, 272 pages, \$39.95

REVIEWED BY GARY MURPHY

A trip to the computer section of my favorite bookstore reveals a huge selection of programming titles. Most appear to fall into one of two categories: those massive 1,000-plus page tomes that all too often have all too little content, and the moderate-sized book that discusses one particular subject in depth.

My latest reading endeavor is *Object-Oriented Programming Using SOM and DSOM* by Christina Lau. At 272 pages, including the index, it certainly isn't a massive book. The author, a staff development analyst at the IBM Canada Laboratory, has been involved in research that uses and extends SOM and the SOM frameworks. So far, so good. Since the book is billed as a programming book, there are a couple of things I look for. The first is that the author does not repeat the information in the reference material that comes with the product. The second is that the author frames the context of the book without evangelizing the subject matter. On these criteria, *Object-Oriented Programming* is exceptional. The introduction discusses the benefits of SOM and the relationship between SOM and the OMG's CORBA specifications.

As the book moves into the basics of SOM, there is a discussion of SOM metaclasses. Since most programmers who will be developing SOM objects are C++ programmers, this is likely to be a new concept. The topic is important for a complete understanding of SOM, so more discussion on the concept of object instantiation using metaclasses would be welcome. Similarly, exceptions in SOM are handled differently than exceptions in C++. The coverage on exceptions leaves a lot of unanswered questions. Since C++ exceptions are an abnormal flow of control, there needs to be an understanding of the disposition of objects as they move out of scope when an exception is thrown. It is also very explicit when a C++ exception is triggered since the throw keyword makes it obvious. It was not clear from the text what triggers an exception in SOM

objects, or if there is an immediate flow of control change.

Context objects are also foreign to C++ programmers. The coverage on the desire for a context object is limited to the one statement that "...context parameters represent information about circumstances of a request that are inconvenient to pass as parameters." I would like to know the cases in which context parameters are appropriate. Any programming environment has linguistic traditions that mark a fluent programmer in the language from one who is unfamiliar with it. I take this idiomatic approach when programming and I completely missed the idiom of context objects.

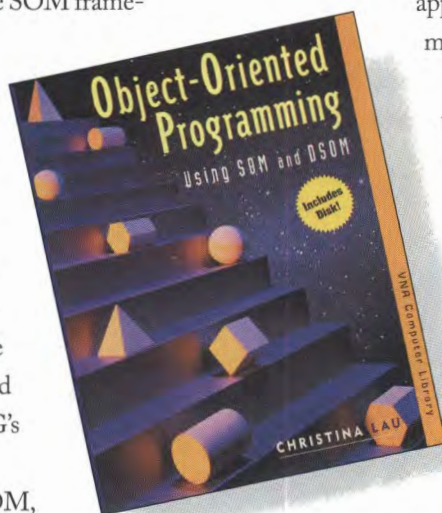
Chapter 4 is an 18-page discussion of some of the differences between the C++ object model and the System Object Model. Since most projects using SOM will be a combination of both types of objects, the information here will assist in determining when objects are appropriate for SOM bindings and which can remain C++ objects.

The chapter on DSOM is by far the longest in the book and since this is perhaps the most compelling part of the SOM frameworks, it's a good thing.

Again the text falls a little short of explaining the context of when a programming idiom is desired. For example, there is a paragraph that states that local proxy can be removed without destroying the remote object. An example of when this might be used doesn't show up until some 20 pages later in an example program.

The remaining chapters cover the persistence and replication frameworks, the interface repository for SOM objects and the emitter frameworks. The examples build on previous examples with the differences in the source code highlighted. This approach makes the new concepts easy to understand.

The author is clearly knowledgeable about the material. She explains how to use the frameworks and how to construct SOM



continued from page 70

objects in a concise manner. But I would have appreciated more information. For example, there are cases where some background on why a construct or concept is needed would have been helpful. The programming examples seem to be using C++ as a "better C" than as an object oriented programming language. I anticipate my SOM object methods would shadow C++ classes and methods. Programming examples constructed in this manner would be beneficial as a programming idiom and as a way to demonstrate similarities and differences between the C++ objects and SOM objects.

With the above exceptions noted, I do recommend this book. The code examples and explanation beyond the official product documentation for SOM will make the transition to SOM programming much easier. Given the time constraints we all have in program development, the value added by this book is well worth the cost in time and dollars to read it. ♦

Gary Murphy has been an OS/2 Presentation Manager programming since 1989 and the lead developer of Chron for OS/2. He can be reached on CompuServe at 73457,365.

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identifies the actions that the client and server parts must accomplish. It also explains that they must each act in a certain way in order for the protocol and the exchanges to work properly.

The final chapter discusses the differences of implementing the DDE protocol on Windows and in OS/2. As the differences are explained, the author defines a subject of the protocol and data formats that would allow an application to be compatible whether it is running in OS/2 or in a WIN-OS/2 session. If you are experienced with Windows programming, this chapter will provide you with many of the hints you have needed about the functions that OS/2 offers your Windows counterparts.

Appendices A-E reference many details necessary to build your own routines. The closing appendix is a collection of most frequently asked questions about DDE. They round out a handy book that both educates and serves as a reference for later use. ♦

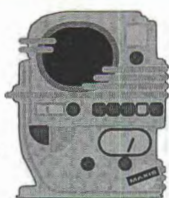
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Warped at Last!

BY JERRY POURNELLE

Warp is running fine on my IBM Value Point Pentium P60/D, which I've named Valiant. I had to remove OS/2 2.1 and install DOS and Windows before I could install Warp. The safest way to do that was to reformat. Then I installed PC DOS 6 and Windows for Workgroups (WfWG).

I was never able to configure Value Point to a higher resolution than plain vanilla VGA under WIN-OS/2, and I had unfairly blamed that on OS/2. The OS/2 experts couldn't figure it out either; but then I discovered that I had the same problem with DOS and Windows. When I reported the problem, it took about three hours for the hardware people to tell the OS/2 experts that a Value Point with an ATI Mach32 video card on the motherboard needs the statement 'ACEPLANAR=ON' in WIN.INI to make ATI's video drivers work properly. That done, everything worked perfectly under DOS/Windows.

Valiant didn't have a CD-ROM drive. Installing Warp from 15 floppies is tedious, but there were no problems. When it stops wanting OS/2 disks, it asks for Windows disks, because Warp contains nothing from Windows, not even the fonts. The good news is that once you install Warp properly, Windows apps run as fast in Warp as they do in DOS/Windows.

Actually I did have some installation problems. If you have a Pentium and that ACEPLANAR=ON statement isn't in WIN.INI, you'll get a lockup when you Warp into Windows; and while you can't run the WfWG network from within Warp, you will have problems warping to Windows if your network card isn't set up properly. Either remove the net card or make it work right under DOS/Windows before installing Warp.

Warp automatically installs a "dual boot" feature; push the dual boot button in the System Commands folder, and Warp will save

itself, exit, and reboot in DOS, where the WfWG network runs fine. Getting back to Warp is also easy.

The next step was to install a CD-ROM drive; I used the Creative Labs Digital Edge, which was a bundle containing their SB-16 SoundBlaster, a triple-speed CD-ROM drive, two good speakers, and about a ton of software. Because there aren't any instructions for installing under OS/2, I used the dual boot feature and got it running properly under DOS.

It's just as well: Creative's cable diagram is wrong, so I got the SCSI cable on backwards. If you do that, you can't insert a CD-ROM. I might have blamed Warp.

Making it work with Warp is simple. You push the **Selective install** button in the System folder; tell the system that the CD-ROM drive is "Other" (since it's SCSI); and on the same pop-up panel tell it that the SCSI support is Adaptec 1510 (and I don't know how you'd figure that out; I had help). Both sound and the CD-ROM drive work now, but if you want to play CDs in the drive, you'll need a little freeware program to set the SoundBlaster; it's available on the Internet.

From the massive ad campaign you'd think Warp was mostly the Internet communications software. Once you get Warp and the BonusPak running, it's about the easiest way I know to get on the Internet, and it has as slick an interface as I've seen. The bad news is that the Internet is complete anarchy. It's going to make a lot of new users crazy, and they'll probably blame that on Warp. My wife, Roberta, started on the Internet with a VT-100 connection, so she expects it to be hard to use. Roberta says it's a good thing she didn't start using Warp, because "It shouldn't look slick if it ain't easy to use."

In my experience, nothing about the Internet is easy to use. I think about that when I see all those smiling people in the TV ads using Warp for 'net surfing. Someone ought to warn the nuns. ♦



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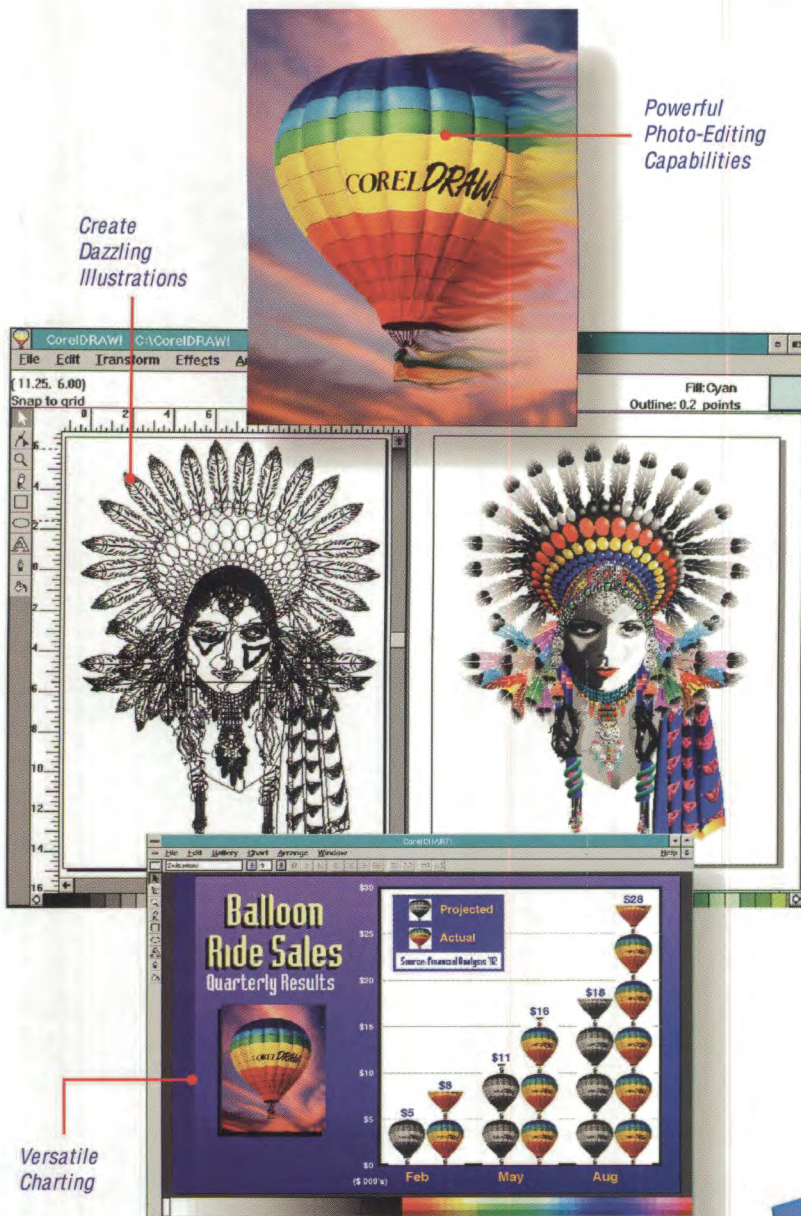
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